



A Forgotten Air War

During World War II, the remote Aleutian Islands, home of the Unanga꣓ people for over 8,000 years, became one of the most fiercely contested battlegrounds of the Pacific. This thousand-mile-long archipelago saw the first invasion of American soil since the War of 1812, a mass evacuation and relocation of American civilians, a 15-month air war, and one of the deadliest battles in the Pacific Theatre. This book tells the stories of the aircraft that served the United States, Canadian, and Japanese military in the Aleutian campaign, along with those of the pilots who flew them.

PHOTOS: 673D AIR BASE WING HISTORY OFFICE
P-40 "ALEUTIAN TIGER" NOSE ART PHOTO: JACK CHENNAULT COLLECTION



National Park Service

• U.S. Department of the Interior



As the nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural and cultural resources. This includes fostering the wisest use of our land and water resources, protecting our fish and wildlife, preserving the environmental and cultural values of our national parks and historical places, and providing for enjoyment of life through outdoor recreation.

The Cultural Resource Programs of the National Park Service have responsibilities that include stewardship of historic buildings, museum collections, archeological sites, cultural landscapes, oral and written histories, and ethnographic resources.



Our mission is to identify, evaluate and preserve the cultural resources of the park areas and to bring an understanding of these resources to the public. Congress has mandated that we preserve these resources because they are important components of our national and personal identity.

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National Park Service
Alaska Affiliated Areas
Aleutian World War II National Historic Area

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World War II Aircraft of the Aleutians

In 1996 Congress designated the Aleutian World War II National Historic Area to interpret, educate, and inspire present and future generations about the history of the Unangan and the Aleutian Islands in the defense of the United States in World War II. In a unique arrangement, the Aleutian WWII National Historic Area and visitor center are owned and managed by the Ounalashka Corporation (the Alaska Native village corporation for Unalaska) and the National Park Service provides technical assistance.

This interpretive guide was written by Karen Abel, with initial contributions by Janis Kozlowski.
Ted Spencer of Wings Over Alaska provided many of the images.

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<https://www.nps.gov/aleu/index.htm>

Front Cover: "Aleutian Morning, B-24s and P-38s" watercolor by Ogden Pleissner.

The Epic of VP Forty-Three

Out of the south with its warm sunshine,
And into the fog and the cold,
Roared twelve slow planes of the "thin blue line,"
All eager, courageous and bold.
For hundreds of miles they had to fly,
Besieged by fog, wind and snow.
Lumbering slowly through the treacherous sky,
Unerringly, unswervingly, straight to the foe.
Through a withering curtain of shrapnel and flak
They persistently spurred their drayhorse planes.
The bombs, they dropped from the heavy loaded rack.
Then their visions were blurred,
There was ice in their veins.
Now up through the cloud, flying blind in the gloom,
Dodging the peaks that would seal their Doom.
Chased by fighters, all guns ablaze,
They plodded back home their planes to repair.

Now, swift is the "Wildcat" in combat,
Fierce is the "Avenger" in flight,
But the enduring Catalina, unwieldy and fat,
Valiantly returned from the raging fight.
Though riddled and maimed, they flew the same planes,
Again and again into Nippon's dread hive.
Through tired and sore, they were guts to the core,
Bombing and strafing with no hope to survive.
In the future, mighty tales will be told,
Of great Fighters, courageous and game
But none will be told so desperately bold
That will equal the fame of Forty-three's name.

– Carl H. "Bon" Amme

Source: Foul Weather Front, 1995:96

Attu
Near Islands
Agattu

Kiska
Rat Islands

Amchitka

Tanaga

Kanaga

Adak

Atka

Amlia

Seguam

Islands of Four Mts

Fox Islands

Umnak

Unalaska

Unimak



ALASKA

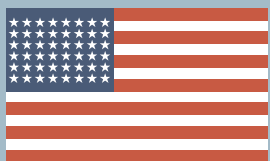
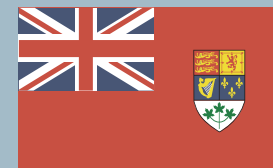
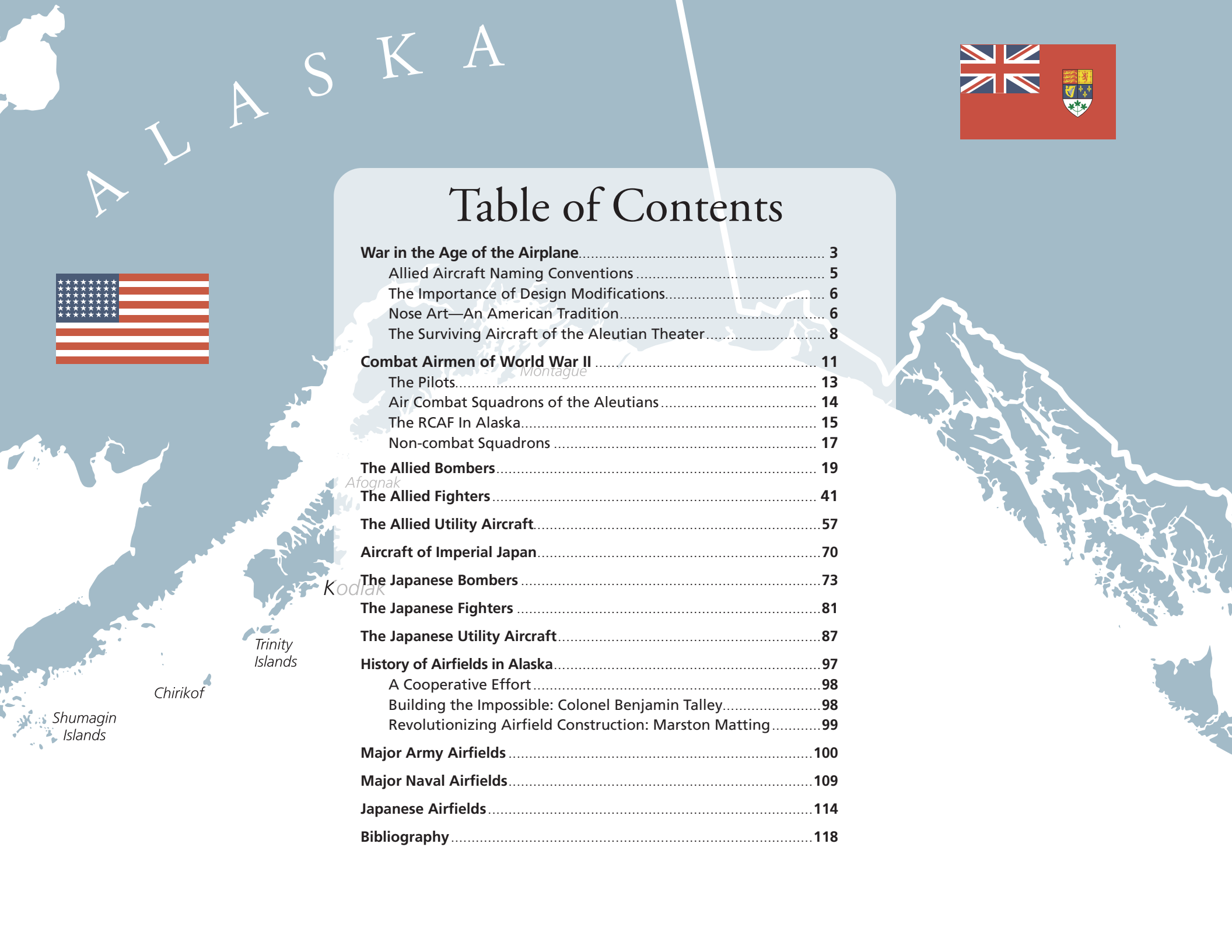


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War in the Age of the Airplane

A Key Component of Modern Warfare

While aircraft of various kinds had played a highly visible, but relatively minor role in World War I, World War II established airpower as one of the keys to modern warfare. From sleek fighters to massive, lumbering bombers, the planes of World War II achieved near celebrity status. They were arguably the most important weapons delivery system of the war. This was possible because during the years between World War I and World War II significant strides were made in aircraft design and engineering. Every country pro-

duced new models in secrecy, hoping for an edge over their opponent.

Several aviation records were set prior to World War II, reflecting the great technological progress already made. Among the achievements were records in balloon altitude, aircraft endurance with aerial refueling, and aircraft speed. Nonstop transcontinental, around-the-world, and blind solo flights were also firsts.

Aircraft materials evolved: metal replaced wood, wire, and doped fabric in aircraft construction. Performance, reliability, and safety improved with the addition of supercharged piston engines, adjustable metal propellers, tailwheels, brakes, retractable landing gear, flaps, automatic oxygen systems, and other innovations. There were also landing lights, voice radios for air-to-air and air-to-ground communication, Norden bombsights, automatic pilots, electrically controlled bomb releases, and other novelties. Greater aircrew comfort and safety were achieved through free-fall parachutes, enclosed

cockpits, inflatable life rafts, and survival kits. Out of this era of innovation, the Germans produced the BF 109, the British had the Spitfire, and the US the P-51 Mustang, B-17 Flying Fortress and the famous B-29 Superfortress.

Both of the primary aggressors in the war, Germany and Japan, launched their campaigns with heavy air strikes. The German Luftwaffe, or air force, used fighters and dive bombers to overrun Denmark and Holland early in the war as a prelude to their capture of France. Fighters such as the Messerschmitt BF-109, and German bombers like the Junkers Ju 88, proved to be formidable weapons. The British responded with the advanced Spitfire guided by the new radar technology, and the Bristol Beaufighter. Thus, the Battle of Britain was a conflict fought entirely in the air and which forced a radical change in Germany's war plans when they found themselves unable to dominate the British skies.

In 1941, Japan also began its war on the US with

Left: Artist Rich Thistle recaptures the scene over Kiska Island during a bombing mission, September 25th, 1942. The two Japanese Rufe Fighters were shot down, one credited to Canadian Squadron Leader Kenneth Boomer and the other to US Commander Jack Chennault.

"VICTORY OVER KISKA" BY RICH THISTLE © WWW.RICHTHISTLE.COM



JACK CHENNAULT COLLECTION

P-38 fighters on alert shortly after the airfield on Adak opened, September 1942.

an air attack. The Japanese used aircraft carriers, which had been in service since the 1920s, in the surprise attack on Pearl Harbor, wreaking havoc on the US Pacific fleet. Their most formidable weapon in the air was the Mitsubishi A6M Zeke or “Zero” as it was known to Allied forces.

The more well-known campaigns of the North Pacific also relied heavily on air power. Jimmy Doolittle’s daring raid on the Japanese islands with a group of B-25 bombers was one of the first attacks waged from the sky, followed by the Battle of Midway and the operation known as the Kiska Blitz. The latter mission was accomplished in some of the toughest flying conditions imaginable

using aircraft in new and ingenious ways to keep the heat on enemy forces. The outcome of the Aleutian Campaign may very well have been different had aircraft not been available as a means of weapons delivery.

Radically new types of aircraft also emerged during World War II. The Germans, British, and Americans began to experiment with jet-powered aircraft, with the Germans Messerschmidt ME 262 and British Gloster Meteor, actually seeing some combat missions. The Germans, and to a lesser extent, the Americans developed pilotless, guided missiles during the war, such as Germany’s V1 flying bomb and V2 rocket. However, the bulk of aerial

combat was conducted using propeller-driven, human-piloted fighters and bombers. None of the newer innovations or aircraft made it as far as Alaska until after World War II.

Over the course of the war, numerous important battles took place on land and at sea, but it is significant that many of the closing events of the war also depended on aircraft. Once the Allies began retaking territory in Europe, heavy bombers began to attack within Germany. By destroying much of its ability to produce fuel and munitions, bombers turned the tide on the German war effort. Then, in the end, Japan too suffered greatly at the receiving end of the B-29 bomber that dropped incendiary bombs on the Japanese mainland, and finally atomic bombs on Hiroshima and Nagasaki in August 1945.

World War II aircraft production numbers were staggering and the United States held the largest share of the market. Between 1939 and 1945 the US produced more than 304,000 aircraft while the Russians followed a distant second with over 157,000. Production numbers fell off from there with a mere 131,549 from Great Britain, roughly 119,871 from Germany and only 76,320 from Japan (US Strategic Bombing Survey, American War Library).

Despite repeated efforts by Commanders of the Alaska Defense Command, Alaska did not rank as a high priority for the procurement of aircraft until after the Japanese had bombed Dutch Harbor, Alaska. Even then, aircraft did not arrive in the numbers requested, and losses kept the fleet to a limited number. Pre-production models and obsolete aircraft were often sent north to fill the void. But, thanks to the ingenuity, bravery and foresight of the airmen of the Aleutians, what resources were avail-

“...as a prelude to any engagement of military or naval forces, a contest must take place for control of the air. The first battles of any future war will be air battles. The nation winning them is practically certain to win the whole war, because the victorious air service will be able to operate and increase without hindrance.”

– Brigadier General William “Billy” Mitchell, following combat service in World War I

able were used to their best advantage in bringing the fight to the Japanese, both on Alaskan soil and in their homeland.

Allied Aircraft Naming Conventions

US Army Air Corps: Until 1920, there was no unified designation scheme for American combat aircraft. Aircraft were simply named after their original manufacturer’s designation (e. g., Curtiss JN-4 “Jenny,” Martin MB-1, DH-4, etc.). That year, the US Army Air Service decided that some sort of unified identification method was needed for American combat planes. The initial system adopted names consisting of two or three letters indicating mission or engine type, and a number. It was modified again in 1924, ultimately resulting in an official designation scheme similar to what we see today. Under this new system, all newly procured aircraft were assigned a letter (or two) that indicated a mission code; pursuit aircraft were designated with a “P,” bombers with “B,” reconnaissance with “F,” and transports with “C.”

The naming conventions also consisted of chronologically numbering the aircraft in the sequence in which they were ordered into service. Chronological numbers for all pursuit aircraft started at one. For example, the Boeing P-12 was the twelfth pursuit design to be ordered by the

Army after 1924. Pursuit aircraft already in service at the time of the change were redesignated, such as the 1923 Curtiss PW-8 (Curtiss Pursuit, Water-cooled-8) which became the Curtiss P-1.

The chronological number was often, but not always, followed by a letter which indicated minor modifications of that particular aircraft type in the order in which they were performed. For instance, the Curtiss P-40K, was the fortieth type of pursuit aircraft to be ordered by the Army Air Service. The letter “K” indicates the eleventh modification of the basic P-40 design.

A few more adjustments were made in the late 1940s, particularly after the Army Air Force became its own stand-alone division separate from the Army. In this instance, four pursuit categories were replaced by one, designated by F. It was also decided not to start the chronological numbering system over again from one. Therefore, pursuit aircraft already in service at the time of the change had their P replaced by an F but kept their original chronological number.

For example, the North American P-51 became the F-51, the Lockheed P-80 became the F-80, etc. As newer aircraft were ordered into service by the Air Force, they were assigned succeeding chronological numbers in the order in which they entered service.

US Navy: Prior to 1922, the Navy, like the Army, had not settled on a functional system for designat-

ing its aircraft. However, following a reorganization of naval aviation into the Bureau of Aeronautics, the Navy adopted a new aircraft designation system that looked quite different than that of the Army. Naval aircraft were identified by an alpha numeric sequence, ranging from three to six parts, that identified, at the very least, the aircraft manufacturer, type and model. The sequence was typically set up as follows:

(prefix)(function) (succession num)
(manufacturer’s code) - (variant number) (suffix)

Under this system, the “prefix” designated special features or role, such as X for experimental. The prefix was not always used. The aircraft’s function was designated by a letter or letters (F for fighter, PB for patrol bomber, etc.). The “succession number” indicated the chronological order in which the aircraft of the given type had been ordered from the manufacturer designated by the manufacturer code, while the “mfg code” was a single letter which specified the manufacturer of the aircraft (C for Curtiss, B for Boeing, F for Grumman, Y for Consolidated, etc.). The “variant” was a letter in the alphabetical sequence which indicated the version of that aircraft in order of its entry into service, and “suffix” was used to indicate a special modification of the basic aircraft to fulfill a role for which the original design

“Nose art for the crew was a personalized reference to a piece of military hardware. You are trusting your life to the plane to get you back safely. You have to go through enemy territory.... So nose art brought the crew together. It gave a signature to their unit. By putting a girl on a plane, the crews felt they were protected on their way out to bomb and patrol. It inspired the crews and gave them a sense of belonging to an organized team. The main purpose, I guess, was to inspire the crews to have faith they’d be coming back.”

– Hal Olsen. *Naval Aviation Mechanic on Tinian*

had not been intended.

For example, the F4U-5N Corsair was the fourth basic fighter type to be ordered by the Navy from the Chance Vought Aircraft Corporation. The “5” designates the fifth modification of the basic Corsair aircraft to enter service. The N suffix designates a special modification for night-fighting applications.

The two different naming conventions led to confusion. Aircraft used by both branches of the armed services were given different names under these two systems. For example, the Army Air Force’s B-24 Liberator is the Navy’s PB4Y Privateer, and the T-6 Texan is the SNJ.

In 1962, Congress decreed that there should only be one system to designate military aircraft in the United States. The new method, Tri-Service Aircraft Designation System was based on the Air Force model and the aircraft manufacturer was no longer identified.

The Importance of Design Modifications

All the combatant nations struggled to keep their aircraft up-to-date and competitive. Aircraft were constantly undergoing modifications and new variants were introduced. A trend emerged—to push the basic airframe design to its limits and beyond

with more powerful engines, more weapons, more armor protection, larger fuel tanks, improved technology, etc. Early model designations were often not as capable as later models and lacked significant features. Therefore, the production model designation told a lot about how the aircraft was configured and how it could be used.

Whenever possible, the specific model known to have been flown in the Aleutians is identified and discussed in the pages that follow. While some of the modifications to an aircraft changing it from an “E” model to an “F,” for example, may appear to be minor, the changes are made to make the aircraft more capable, increase safety for the crew and ultimately determine the success of the aircraft in combat.

These modifications may be likened to choosing a car with particular features. Your choices make a difference in how the car performs, how comfortable you are in it and how long it will last in the environment where you live. When you go to a dealer to buy a new vehicle one of the most important features to choose is the type of engine. The engine has a rating for fuel efficiency and power output, making a difference in how fast you “get off the line” and how often you have to stop for fuel. Fuel consumption and power make a considerable

difference in how an aircraft can be used and may mean the difference between “getting there” and “going down.”

Nose Art—An American Tradition

In a tradition that primarily began during World War II, colorful images have appeared on the nose sections of American military aircraft. Although squadron insignia were seen on aircraft in World War I, true nose art is a World War II phenomenon. The practice is predominantly American, however there are several examples occurring in other countries, as seen by the early German Luftwaffe squadron ZG 76 flying BF 110s with their “shark mouth” motif. For US forces, it is a tradition that continued through the Korean War and to a lesser extent today.

Like so many ideas and art forms in a changing world, aircraft nose art is both loved and hated, photographed and censored. The paintings known as nose art are a controversial tradition. It holds a place in history as an important expression of historical and societal indicators that mark the generation in which it was produced. It is both an example of folk art, of popular expression, sentiment and a record of the past. For these reasons, it is an important part of World War II history.

Nose art served an important function during the war. It personalized an aircraft for its crew, giving the plane an identity of its own and boosting the morale. The aircrew, as well as ground crew chose the name of the plane and helped create the artwork to accompany it. Aircraft such as the P-38 with two engine nacelles in addition to the fuselage nose allowed for additional creativity in design.

Nose artists came from the ranks of the military and from civilian life. By war's end there was such a demand for artists that they received \$15 to as much as \$50 per aircraft for their paintings creating a new "industry" of sorts during that time period. The ever-popular Disney Studios also participated. Walt Disney and his artists designed and painted squadron and unit insignia at the onset of the war to raise the spirit of the troops. Over 1200 unit insignia were completed by Disney staff by war's end at no fee to the US government. Much of the nose art was painted between missions by the crews but Disney's contribution was accomplished at the time the aircraft was produced.

The military never officially sanctioned nose art, but unofficially it approved of it as a morale-booster. It was a survival technique for combat airmen in a harsh environment. A bit of levity and diversion was good for the airmen, and a measure of pride and enthusiasm came from a chance for individual expression. Generally, the farther from headquarters a squadron was, the racier the images on their aircraft, as censure was less likely.

Popular magazines, comic strip characters, movie stars and Walt Disney provided images for and influenced nose art. Humor, slogans, girls, cartoons, nicknames, hometowns, patriotism, warriors and youthful bravado were some of the themes that inspired the images—but mostly it was girls! Some



RCAF HISTORY AND HERITAGE OFFICE

14 Fighter Squadron, RCAF painted their P-40s with a version of the shark mouth, perhaps a tribute to Jack Chennault's Fighting Tiger father, General Claire Chennault.



ALASKA MILITARY HISTORY ASSOCIATION COLLECTION

Nose art was a way of keeping spirits high and building camaraderie. An artist hard at work painting the cowl of a P-40 in the Aleutians.



ALASKA MILITARY HISTORY ASSOCIATION COLLECTION

Scantily clad women adorned many an aircraft, as you see here on the fuselage of this PB4Y. The practice was encouraged to provide motivation by any means necessary.

of the racier images were of women and these are among the most controversial of images today. Rather than being derogatory towards women, Anne Josephine Hayward, a member of the American Red Cross Aero Club in England and a painter of nose art, saw the art form in a different light: "Its purpose was worthy, to bolster military morale in a terrible time. The members of each crew came to feel that their plane and their painting were somehow special and would bring them luck, a safe return from hostile skies. The art may have been frivolous at times, but it was never anti-social" (Ethell 1991:120-121).

The Surviving Aircraft of the Aleutian Theatre

Few Aleutian aircraft survive today, some are even airworthy thanks to aviation architects and a dedicated warbird community that endeavor to keep them flying. In Anchorage, Alaska, a fully restored P-38G 42-13400 sits on display at Heritage Park on Elmendorf Air Force Base, now part of JBER. This aircraft, flown by Captain Robert Nesmith, 54th Fighter Squadron, was inadvertently flown into the ground in Temnac Valley, Attu Island, on New Year's Day 1945. A salvage party removed usable parts shortly afterwards and abandoned the Lightning to the elements. Except for an occasional visitor, the P-38 remained forgotten until Ted Spencer of Anchorage learned of the downed fighter and had it placed on the National Register of Historic Places in 1979. Twenty years later, a recovery effort was launched headed by former Eleventh Air Force Historian Colonel (RET) John Cloe and the aircraft was brought to Anchorage for restoration.

The Elmendorf P-38G Lightning is the only G-model intact and on display. It is also one of nine



This recovered P-38G on display at Heritage Park on Joint Base Elmendorf-Richardson in Anchorage.

aircraft listed on the National Register of Historic Places. The USAF Museum accessioned the P-38 into its inventory on September 13th, 2002.

Another Aleutian aircraft rescued from the hands of time is the Canadian Kittyhawk IA (P-40E) AK 875. It hangs proudly on display at the entrance to the Smithsonian's Steven F. Udvar Hazy Center in Chantilly, Virginia. The P-40 was part of the Royal Canadian Air Force 111 Fighter Squadron that arrived in Anchorage to aid in the defense of Alaska in June 1942.

Flown by P/O Robert W. Lynch, the P-40 suffered a landing accident at a refueling stop in Naknek while en route to Umnak July 13th, 1942. What P/O Lynch did not know is that this landing incident would potentially save his life. Leaving him to a transport, the squadron's formation of

seven continued on. Tragically, the airmen rounded the point at Makushin volcano and flew straight into the notorious Aleutian fog. Disoriented and unfamiliar with the terrain, four of the seven airmen fatally crashed into the Unalaska mountain-side. Another presumably went into the sea. P/O Lynch and his broken Kittyhawk were spared.

The Royal Canadian Air Force went on to recover and repair the aircraft several months later. It remained in service in Alaska until after the war. In subsequent years it changed civilian hands several times before it came into the possession of an Explorer Scouts youth group in Meridian, Mississippi who, in 1964, donated it to the Smithsonian's National Aeronautic Collection. Andrews Air Force Base restored the aircraft in 1975 and painted it to represent, not the theater in which it served, but the

75th Fighter Squadron, 23rd Fighter Group, 14th Air Force, to honor their former Deputy Director, Col. Donald S. Lopez.

The Douglas O-38F (#33-324) is also on display in Ohio, at the National Museum of the United States Air Force. This observation plane was the first aircraft to be assigned to Alaska. It was shipped to the territory in April 1940 for use by the Cold Weather Test Detachment located at Ladd Field. Later in the year, the O-38 was given to Major Davis, the first chief of the Air Force in Alaska, for temporary use. On June 16th, 1941, Lieutenant Milton Askin and his mechanics Sgt. Raymond A. Roberts were flying seventy miles southeast of Fairbanks when they had mechanical trouble forcing them to crash land in the wilderness.

Uninjured, they managed to hike out but left the plane behind. Twenty-seven years later a recovery team from the museum retrieved the aircraft which remarkably had little damage. It was taken to Wright-Patterson AFB where it was restored and added to their museum. A few other airworthy survivors include two B-26s, several RCAF Kittyhawks and a P-40.

Roughly 34 Allied (US and Canada) and 13 Japanese military aircraft types were in service in Alaska during World War II. What follows is a selection of the most widely used airframes. Our goal is to faithfully record the details of the aircraft used in the Aleutians, in order to document the history of those who served in the Aleutian campaign. We welcome comments and corrections

and any stories you would like to contribute. Please contact the Aleutian World War II National Historic Area at the National Park Service, Alaska Regional Office, 240 West 5th Avenue, Anchorage, AK 99501, or through our website at <https://www.nps.gov/aleu/index.htm>.

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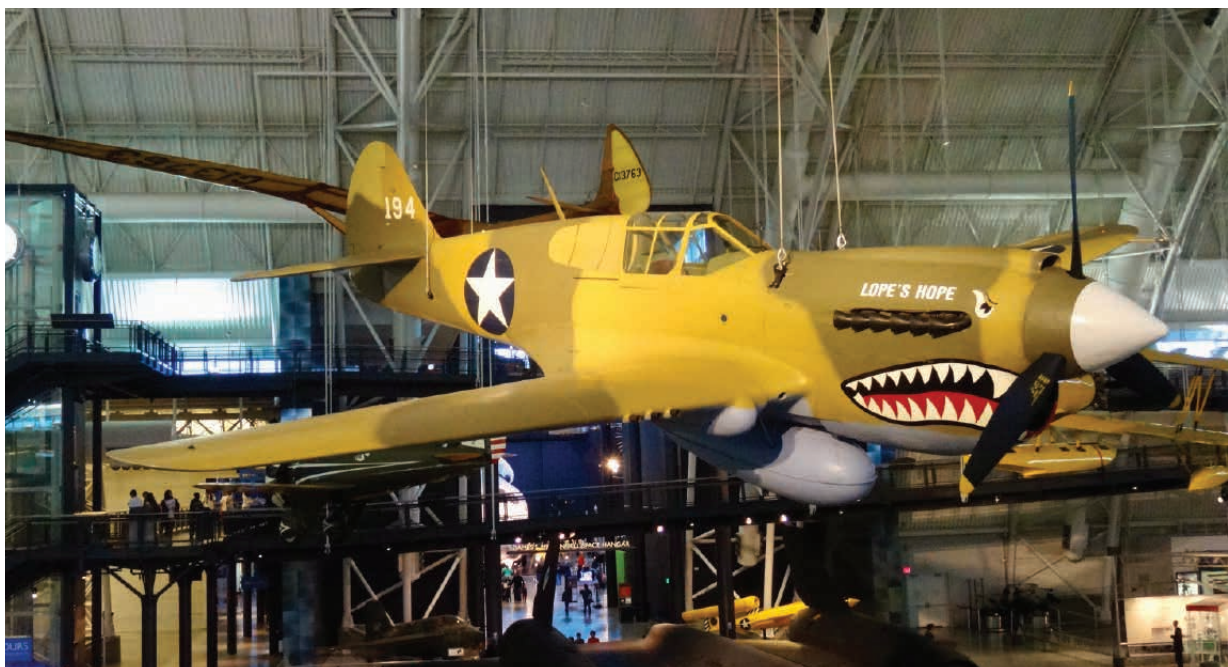
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ROBERT LYNCH COLLECTION, COURTESY OF KAREN ABEL

Kittyhawk IA, now painted with American markings, hangs proudly at the entrance to the Smithsonian's Steven F. Udvar-Hazy Center in Chantilly, VA.



NATIONAL MUSEUM OF THE UNITED STATES AIR FORCE

The first aircraft assigned to Alaska, a Douglas O-38 F Pelican, is on display at the National Museum of the United States Air Force.



Combat Airmen of World War II

From All Walks of Life

Combat airmen in World War II, and in the Aleutians, came from all walks of life, from every state in America. They came from farms in rural Kansas, from the factory towns in Pennsylvania, from the deep south and even from your neighborhood. They were from wealthy families, middle class families and poor families alike. They were Catholic and Protestant and they were mostly white, although some were not. However, they all shared one thing: they had volunteered for air combat positions.

Airmen from Lt. Watkins crew as part of the 404th Bomb Squadron. This photo comes from the collection of Henry Kowalski who served as a Gunner and Aerial Photographer on a B-24. Note the two large aerial photography cameras in front. These cameras were used for reconnaissance and mapping.

NPS, HENRY K. KOWALSKI COLLECTION

No one was drafted for combat air service; only volunteers were accepted.

Many volunteered because of the perceived romance of flying, while others considered airmen the privileged or elite class of service. They had grown up in an age when Charles Lindberg and Jimmy Doolittle were well known and admired aviators during the golden age of the airplane. Many wanted to become pilots but not all of them did. Combat airmen also served as co-pilots, navigators, bombardiers, radio operators, flight engineers and tail, top and ball turret gunners as well as waist gunners. Together they made a team, each dependent on the others for their survival.

Before Pearl Harbor, the air cadet program required two years of college, but the requirement was soon waived as the need for pilots grew. Volunteers had to meet high standards for physical conditions, achieve high testing scores, and be between the ages of 18 and 27. Scoring high in physical tests sent a candidate to pilot training while high scores in math



RCAF HISTORY AND HERITAGE OFFICE

The entrance to the Kashim Club, an enlisted men's club at the Elmendorf base in Anchorage.

Oh! Never Mind

*Oh, come and join the Air Corps
And earn your flying pay.
You never have to work at all,
Just sit around all day.
Now other people study hard
And some of them go blind.
You sit and shiver in your hut,
But you will never mind.
Oh! never mind. Oh! never mind.
Oh! come and join the Air Corps
And you will never mind.*

*Now you can be promoted
As high as you desire.
You're riding on the gravy train
When you're an Army flier.
And when you are about to be
A general on the line,
Your engine coughs,
Your wings drop off,
But you will never mind.
Oh! never mind. Oh! never mind.
Oh! come and join the Air Corps
And you will never mind.*

*From here out to Kiska
And back to where you sit.
Your propeller comes to a stop.
Your engine it has quit.
You cannot swim, the water's cold,
The shore is far behind.
A tasty dish for the crabs and fish,
But you will never mind.
Oh! never mind. Oh! never mind.
Oh! come and join the Air Corps
And you will never mind.*

**Jack F. Roberts,
406th Bomb Squadron**

Source: Foul Weather Front 1995:217

and problem-solving favored navigator school. Psychological “defects” or poor performance were reason to wash out a candidate during training.

Many young aviators wanted to fly fighter planes because of the perceived glamour of the position and the fact that the job offered a sort of independence as well as a chance to fly the hottest planes of the time. Bomber pilots were thought to be (and were) less in control of their missions and powerless to fight back against fighters and flak

and therefore, less glamorous. American wartime propaganda painted the combat airmen as glamorous, devil-may-care flyboys, laughing in the face of danger. But most were not that way. Crews were a mix of different religions, ethnicities, and economic status, and they managed to perform a tough and dangerous job, wondering each day if it would be their last.

Combat airmen did not care about the battles over production numbers and costs. They were concerned mainly with the reliability, durability and dependability of the aircraft they flew. These factors meant the difference between life and death for the crew. A malfunctioning engine may preclude a safe return to base and a skin made too thin wouldn't afford the crew the protection they needed from anti-aircraft fire.

How well a plane performed in combat was also critical. Airmen had to have confidence in their aircraft to perform their missions and a lack of confidence affected their willingness to fight. The P-39 Airacobra, for example, was not well liked by pilots given its tendency to enter a spin if stalled in a tight turn. The aircraft, out of control in a spin, with its rudders pounding on the pilot's feet, could be recovered if he pulled the throttle back and took his hands off the controls—if he had enough altitude. But generally panic set in and the pilot bailed out rather than go down with the aircraft. In contrast, despite some problems of its own, the P-38 Lightning gave airmen confidence. It was a fast, nimble machine compared to others, with a good measure of reliability. The second engine gave the airman a margin of safety on long overwater flights necessary in the Aleutians and elsewhere.

In most theaters, aerial combat and ground fire took the highest toll on aircraft and loss of lives. But weather was to be the fiercest enemy of Aleutian Campaign airmen leading to the highest American combat-to-operational loss ratio for any theater in World War II. A combined total of 41 Eleventh Air Force, US Navy's Fleet



NATIONAL ARCHIVES AND RECORDS ADMINISTRATION



673D AIR BASE WING HISTORY OFFICE, L. SPOONITS COLLECTION

A bomber crew on Adak looks to the sky for the safe return of their comrades.

Air Wing Four and Royal Canadian Air Force aircraft were lost in combat while over 184 losses were attributed to operational accidents: mid-air and ground collisions (often due to poor visibility), malfunctioning aircraft, and fuel exhaustion. The subsequent Kurile Islands operations based out of Attu against the Japanese homeland added another 123 combined operational losses while suffering an extra 62 combat related losses.

The Pilots

Only the best or blessed Aleutian pilots survived. The skill and bravery of the pilots who flew in this campaign is hard to gauge in a system that measures success by enemy aircraft downed. Uncharted territory, unknown mountainous terrain, long over-water missions with limited and rudimentary instruments complicated navigation. Compasses were sometimes inaccurate because of the magnetic anomalies that

These lost airmen were the “finest group of enlisted men” he had served with in his 26 years as an Air Force Pilot: and they deserved the “best medals that could be given.”

— Lieutenant Albert Aiken, 11th and 18th Fighter Squadron, quoted in Cloe 1991

plagued the area, throwing pilots miles off course. Inconsistent or nonexistent radio communication and lack of homing beacons or control towers compounded the difficulties. These factors, combined with unpredictable and often impenetrable weather, often created a pilot's worst nightmare.

Towards the beginning of the campaign, bombers would fly missions that were more than 1200 round-trip miles over water with the only alternate runway located hundreds of miles from their home base. Even conducting simple operational patrol duties was life threatening. Fog, so thick you could not see a wing tip, enveloped the islands in a matter of seconds. Pilots were forced to fly above the weather, sometimes for hours, until luck would have it and they'd find a hole to let down in, hoping to spot a recognizable landmark to guide their way back. Many times, they were not so fortunate. Pilots were forced to fly above the clouds until they simply ran out of fuel. Now desperate, they descended through the unknown only to fly head on into one of the thousand mountains that make up



JACK CHENNAULT COLLECTION

(L-R) 11th FS pilots Lt. Daniel McKee, Lestor Chancellor, Jacob Dixon and Winfield McIntyre listen closely to a briefing conducted by their Captain Edgar Romberg prior to a mission.

the Aleutian chain. If they ditched in the freezing waters of the North, they only had minutes to spare before they succumbed to the environment. These pilots were tough.

Unprecedented tactics were required to operate successfully in such a remote and unforgiving place. The respected and rugged Bomber Commander, Colonel William O. Eareckson, out of necessity, pioneered low level bombing tactics over Kiska Island. He came in as low as 700 feet, which was



673D AIR BASE WING HISTORY OFFICE

The unconventional and dynamic leader, Colonel William O. Eareckson, head of the 11th Air Force Bomber command, prepares his bomber crews for their next mission over Kiska, Umnak, 1942.

“Most healthy young men or women from sixteen to forty years of age can be taught to fly an ordinary airplane. A great majority of these may become very good pilots for transport or passenger carrying machines in time of peace; but the requirements for a military aviator call for more concentrated physical and mental ability in the individual than has ever been necessary in any calling heretofore.”

– Brigadier General William “Billy” Mitchell, *Skyways* 1930

brazen and almost unheard of at the time. This strategy was later used elsewhere in the Pacific. He deviated from normal practices again when he unconventionally ordered bombers with navigational capabilities to escort several two ship flights of P-38s. The bombers’ mission was to provide top cover to a seaplane tender that was under attack. This offbeat decision resulted in the very first P-38 aerial victories of the war, as each pilot, Lieutenants Stan Long and Kenneth Ambrose were credited with downing a Kawanishi H6K Mavis flying boat. Unconventional battlefields called for unconventional tactics. In the Aleutians improvisation was the key to success, the key to life or death for a flyer.

Air Combat Squadrons of the Aleutians

For many, the war was the most important and formative experience of their lives.

The crews formed deep bonds—a brotherhood in the sky—as they suffered the hardships of combat over the Aleutians and watched their friends, drinking buddies and baseball teammates, one by one and crew by crew, fail to return. Nothing could mature a young man faster than war.

The importance of the crew could not be understated. The motivation for daring feats and sacrifice was often the safety of the crew. In 1944, army psychiatrists conducted a study of bomber crewmen. What they found in common



Emblem of Patrol Wing 4

among the men was a deep and extremely cohesive bond among fellow crewmen. The reason they continually and without hesitation faced the deadly skies of combat was for their crew. They said they did it because they couldn't let the other men down.

Air combat squadrons were part of the Eleventh Air Force of the US Army Air Force as well as Patrol Wing Four (later designated Fleet Air Wing Four) of the US Navy. In addition, the Royal Canadian Air Force stationed its P-40-equipped 14 and 111 fighter squadrons in the Aleutians to assist in expelling Japanese forces from Kiska and Attu.

Over the course of the war, the Eleventh Air Force consisted of the 11th, 18th, 42nd, 54th, 57th and 344th fighter squadrons, and the 21st, 36th, 73rd, 77th, 404th and 406th bomber squadrons. The 11th fighter squadron may be best known as the squadron led by Major John S. Chennault, eldest son of the famous Flying Tigers leader General Claire Chennault.

The Navy's Patrol Wing Four had at least 11 units: 41, 42, 43, 45, 51, 61, 62, 131, 135, 136, and 139 as well as some carrier based aircraft and several in shore patrol squadrons: VS- 6D14, 1D13, 48, 49, 56, 70. These squadrons and the Army Air Force were active during the Aleutian Campaign. Some of them were later part of the Empire Express missions to the Kurile Islands. These latter efforts were determined to halt or deter shipping, military buildup and base construction on the Japanese Kurile islands and prevent air strikes against the Allied forces.



Emblem of the Eleventh Air Force

The RCAF In Alaska

Air defense of Alaska was a cooperative effort between the United States Army Air Corps and Canada's Royal Canadian Air Force. This combined force was a critical component particularly at the beginning of the campaign, when US air strength in Alaska was severely inadequate. Upon arrival into Anchorage in June 1942, the Canadian squadrons made up twenty five percent of General Butler's air combat units.

Many of the Canadians were air combat veterans from the European Theater, and Butler's Eleventh Air Force pilots lacked such experience.

This military alliance was the result of a formal American-Canadian defense partnership which officially began in 1940 with the signing of the Ogdensburg Declaration and the establishment of the still active Permanent Joint Board on Defense (PJBD). This bi-national advisory board provides cooperative defense solutions for the continent, largely in the areas of planning the measures, troop and material resources required to defend North America. Within this agreement, American Western Defense Command and Canadian Western Air Command shared control of World War II defense efforts in Alaska, including defense of the air.

In May 1942, the first RCAF flying unit deployed to Alaska was sent to Annette Island in the southeast portion



Emblem of the Royal Canadian Air Force

of the territory, to provide air defense for US and Canadian forces at Canada's Prince Rupert as well as Yakutat and Ketchikan in in southeastern Alaska. No. 115 Squadron, equipped by the RCAF with Bristol Bolingbrokes, made history as the first Allied



Joint forces on Amchitka as American P-40s and Canadian Kittyhawks, brothers in arms, are staged and ready for action.



“Pilots are pilots therefore we had no problem blending into the routine for the 11th Pursuit’s operational duties. We definitely retained our identity and our relations with the Americans could not have been better.”

– Pilot Officer Robert Lynch, 111(F) Squadron, RCAF

force to set up base on US soil and fly in defense of US military installations and surrounding areas.

After deciphering the Japanese code, by May 1942 US Naval Intelligence warned of an imminent attack on Midway and Dutch Harbor. Additional US assets could not be spared for Alaska and thus John DeWitt, US commander of Western Defense Command, urgently requested that RCAF units replace the US squadrons sent forward to Aleutian bases at Umnak and Cold Bay. Concerned about the vulnerability of their own west coast, Canada’s Western Air Command hesitated to relinquish forces. However, convinced by American military leaders of the dire state of Alaskan defenses, and recognizing that the defense of western Canada was intimately tied to Alaskan defenses, they relented. As a result, the Canadians deployed two squadrons to defend Elmendorf Airfield in Anchorage and dispatched an additional fighter squadron to Annette Island.

The Canadian squadrons in Anchorage made up the “X” Wing led by Battle of Britain veteran Gordon McGregor. They were attached to the US 11th Fighter Squadron and although McGregor still retained control of all major decisions that affected the squadrons, operational command was to be given to the Americans, another historical first for an RCAF unit.

From the beginning, the two nations worked almost seamlessly together sharing patrol duties, aerial tactics, and even US aircraft. Recreational activities, combined with the shared hardships of being stationed in such a remote theater, built camaraderie between the airmen. Both had a dedication to the mission at hand which led to

ROBERT LYNCH COLLECTION, COURTESY OF KAREN ABEL

Brothers in the air and on the ice. Pilot Officer Robert Lynch (left) and an unknown US bomber pilot are acting as referees during a recreational hockey game on Kodiak Island, 1943.

“It is with great regret that we see the departure of 111 Fighter Squadron, Royal Canadian Air Force. Their entire tour of duty here has been noted for the sincere cordiality, total co-operation and the frank and easy manner in which they mingled with our personnel stationed here... We are proud to be brothers-in-arms with them.”

– Major Jack Chennault AAF

mutual respect and trust for one another. Within weeks of arriving, No. 8 Squadron was sent to Nome to patrol the Bering Sea. The RCAF's 111 (F) Squadron moved forward to Umnak, then Kodiak, and eventually, in April 1943, Amchitka, where they were joined in rotation by the RCAF's



Pilots from 14 (F) Squadron, RCAF, along with three American airmen from the 18th FS. The two nations would spend the next six months flying together out of Amchitka during missions over Kiska Island. April 1943.

newly arrived No. 14 Fighter Squadron. With their American colleagues, the two Canadian squadrons flew regular missions over Kiska and accumulated a combined seven hundred combat flight hours. Considering the enemy target was only 70-90 miles away, achieving this many flight hours meant an extraordinary number of sorties in support of the Kiska mission.

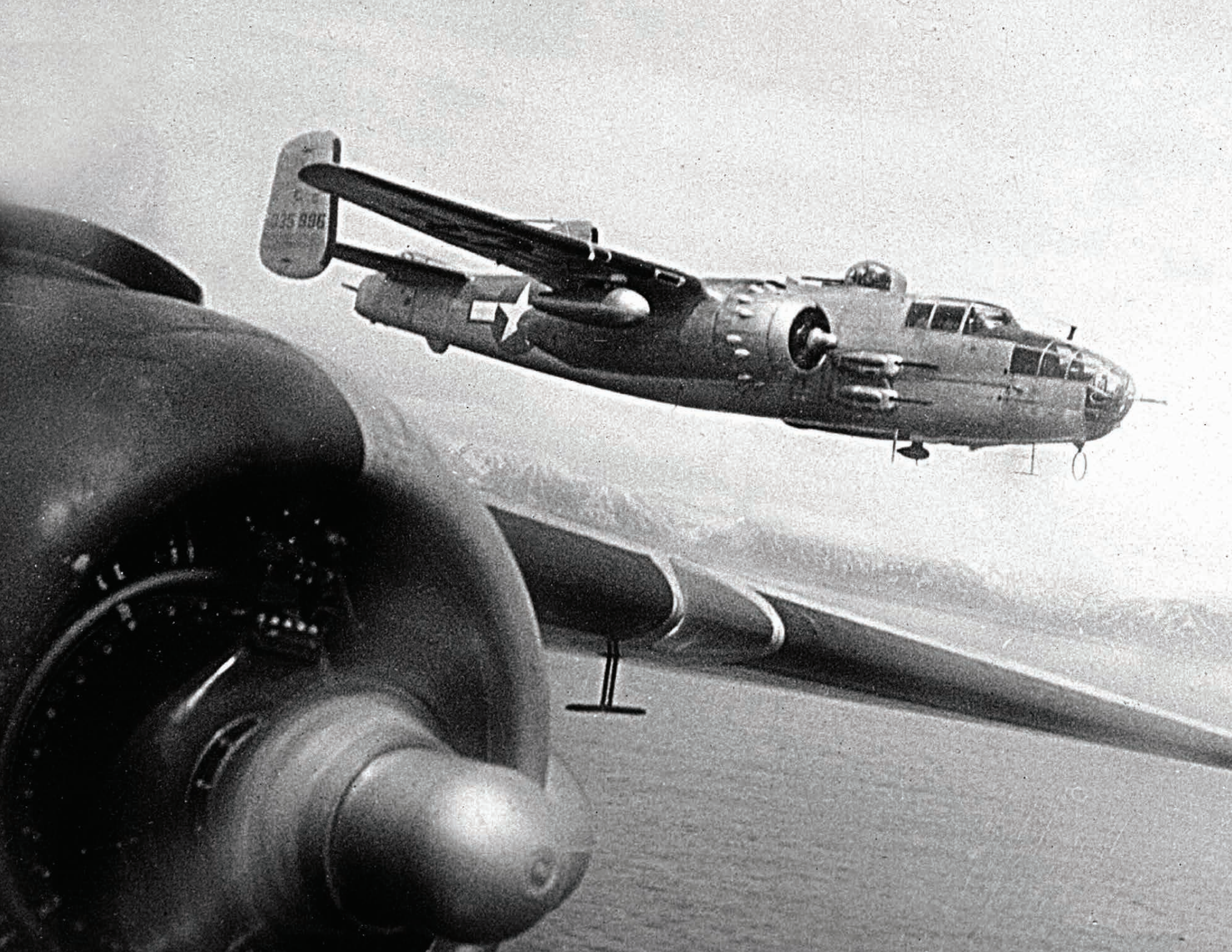
In all, there were over five hundred RCAF personnel that served in the Aleutian Theater. Eleven Canadian airmen received American Air Medals, a high honor for a foreign military member and the first to be given out in the war. Though considerable differences existed within each organization, ultimately American and Canadian military forces worked in close collaboration coordinating their defense efforts and resources for a unified cause. This not only created a favorable outcome at the end of the war, but it also paved the way for future Canadian-American defense relations, particularly the binational defense command we know today as NORAD (North American Aerospace Defense Command).



An OS2U Kingfisher and a PB5 Catalina on Adak, 1943.

Non-combat Squadrons

In the Aleutians, transport squadrons were responsible for placing troops among the island archipelago and elsewhere in the state. They could potentially have encountered combat fighters from the Japanese held islands, but such hostile encounters were infrequent. They did, however, suffer from the brutal Aleutian weather and several aircraft and crew losses were attributed to the weather. Both the 42nd and 54th troop carrier squadrons served in support of the Aleutian operations.



The Allied Bombers

First-line Fighter at the Onset of the War

Both medium and heavy bombers served in the Aleutians. A medium bomber, by definition, was a bomber designed to operate with a medium bomb load over medium distances: it could deliver up to 4,000 lbs of bombs over a range of 1,500 to 2,000 miles. The B-25 Mitchell and B-26 Marauder are examples.

In contrast, a heavy bomber was of the largest bombers with the longest range. It was designed to carry a load of 8,000 lbs to more distant targets than the medium bomber. The B-24 is an example of this type.

These designations became less meaningful towards the middle of World War II when the average fighter aircraft became capable of carrying a load of 2,000 lbs and had taken over the missions formerly carried out by the medium bombers.

In Europe, bombing runs were conducted from high altitude. In contrast, the Aleutian bomber squadrons had to devise new tactics given the poor weather they often encountered over the target. Before bases were established on Adak and Shemya, bombers traveled unusually long distances to reach Kiska only to find the island obscured by fog and/or clouds. Low level bombing—as low as 700 feet—with fighters providing high cover, and bombing through an overcast layer became common. The latter method was often performed with undetermined results. Bombing runs through the overcast on Kiska were conducted in the blind, with the pilot timing his flight on a compass heading off the volcano. Wind drift, if not calculated and corrected for, could cause a bomb load to fall harmlessly in the tundra or out to sea.

Boeing B-17 Flying Fortress

Douglas B-18 Bolo

Consolidated B-24 Liberator

North American B-25 Mitchell

Martin B-26 Marauder

Lockheed PV-1 Ventura

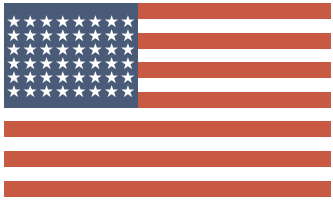
Lockheed PV-2 Harpoon

Lockheed A-29 Hudson

Douglas A-24 Banshee

Bristol Bolingbroke IV, Royal Canadian Air Force (RCAF)

Boeing B-17 Flying Fortress



Model:	B-17E
Power:	Four Wright R-1820-65 nine cylinder radial engines rated at 1000 hp each
Top Speed:	318 mph
Cruise Speed:	195-223 mph
Range:	3200 miles
Ceiling:	36,500 ft
Bomb Load:	4000 lbs
Armament:	Ten. Twin .50 caliber machine guns in the top, ball and tail turrets. Single.50 caliber machine guns in left and right waist positions and rear dorsal. One.30 caliber machine gun in the nose.
Crew:	9 - pilot, co-pilot, navigator, bombardier, radioman and 4 gunners

UNITED STATES ARMY AIR FORCES WOA / TED SPENCER



The B-17 was one of the most famous airplanes ever built. It served in every World War II combat zone.

The Feared Boeing Bomber Joins the War in the Pacific

The Boeing B-17 Flying Fortress, a heavy, four-engine bomber, was one of the most famous airplanes ever built. It served in every World War II combat zone and was the most feared and respected American aircraft during the early stage of the war in the Pacific. The Japanese regarded the B-17 as a tough and well-armed opponent, one that was particularly difficult to shoot down. It could absorb an incredible amount of battle damage and still remain flying.

However, the early B-17s were insufficiently protected against attacks from the immediate rear, a deficiency that the Japanese were quick to exploit. Fortress pilots were able to compensate somewhat for this weakness by flying their planes back and forth when attacked from behind, giving

the left and right waist gunners, alternately, a shot at the approaching aircraft. Another tactic was to rig sticks in the rear of the plane, hoping to convince Japanese attackers that tail guns were actually fitted into these planes.

A year before Pearl Harbor was attacked, two early model B-17Bs were sent to Ladd Field in Fairbanks, Alaska to undergo cold weather testing. By March of 1942, the newer, large-tailed B-17Es began to join the fleet in the North Pacific. The tail gunner of the B-17E was an unpleasant surprise for the Japanese, who had become accustomed to attacking the Fortress from the rear. But the B-17E also had a weakness. It soon became clear that the remotely-controlled belly turret did not work very well, the complicated system of mirrors being so confusing to the gunner that he could not see anything at all. It was

“On this sad day the 36th flew its B-17E into combat for the last time. Tomorrow, we are to become... a B-24D outfit. Many an eye was moist as the big Boeings settled in their revetments for a well deserved rest.”

– Lt. Billy Wheeler, February 10th, 1943

soon replaced on the production line by the famous ball turret.

Service in the Aleutians

The Eleventh Air Force primarily assigned the B-17B and B-17E to the 36th Bombardment squadron. The first “combat ready” version of the B-17E (41-2398) arrived in March 1942. The second followed in May (38-215) which was one of two B-17B’s, “Old Seventy,” that came from the Cold Weather Testing Unit at Ladd Field in Fairbanks. They were both equipped with SCR-521 airborne radar, with improved range and winterization kits. Accounts differ, but at its peak the Eleventh Air Force may have employed as many as 11 B-17s flying a variety of missions during the Aleutian Campaign.

Ideally suited for patrol with its airborne radar, the B-17 served as a patrol bomber prior to the start

of the Campaign and, in fact, it first found the Japanese carriers off the Aleutians in early June 1942. At the onset of the campaign, after the invasion of Attu and Kiska, its primary role was in the bombing of Kiska and was used most effectively on low level strafing runs over the island often through heavy cloud cover. One low-level run on Kiska was made at a record 700 feet. This technique differed markedly from how the aircraft was used in other theaters of operation at the time.

Weather and pilot error destroyed as many B-17s as did combat sorties. Major Marvin E. Walseth, 36th Bombardment Squadron, flying B-17B 38-215, “Old Seventy,” disappeared returning from a photoreconnaissance mission over Kiska on July 18, 1942. The wreckage of the aircraft and the 6-person crew were found several days later on Cape Udak on the southwest corner of Umnak Island. On August 28, 1942 another B-17 went missing during an attempt to land at Umnak. Lt. Albert J. Wilsey and his copilot apparently became disoriented in the dark and flew off in another direction killing all 9 aboard. Then on January 21, 1943 the 36th Bombardment Squadron deployed 7 B-17Es from Cape Field, Umnak to Adak. Two collided during their approach to Adak and the B-17 flown by Lt. Major H. McWilliams and his crew disappeared. The other B-17 managed to land safely despite severe damage to its tail section.

Combat sorties also took their toll. On June 3, 1942 Captain Jack L. Marks, flying a B-17B

dropped his bomb load from 900 feet through the overcast on Japanese cruiser Takao. A second bomber, piloted by Lt. Mansfield, also released his payload and reported his descent to assess the damage. Mansfield, his eight-person crew, and B-17E 41-9084 were never heard from again.

Later, on July 6, 1942, a Japanese “Rufe” float fighter shot down Major Marks, who was flying B-17E 41-9126 over Kiska Harbor. The fighter attacked the flight of three B-17s at 15,000 feet during a bomb run. The bomber crews broke formation and the fighter concentrated on the lead B-17 flown by Marks. Its right engine on fire, the B-17 crashed into the harbor and sank to the bottom, killing Marks and his eight crew members.

The B-17 remained operational throughout the Aleutian Campaign providing navigational support for fighters, weather reporting, photo reconnaissance and bomb damage assessments. The B-17 flew its last mission of the Aleutian Campaign on February 10, 1943.

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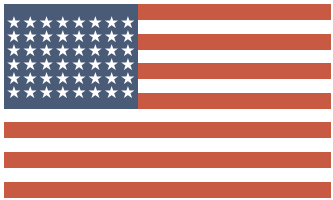
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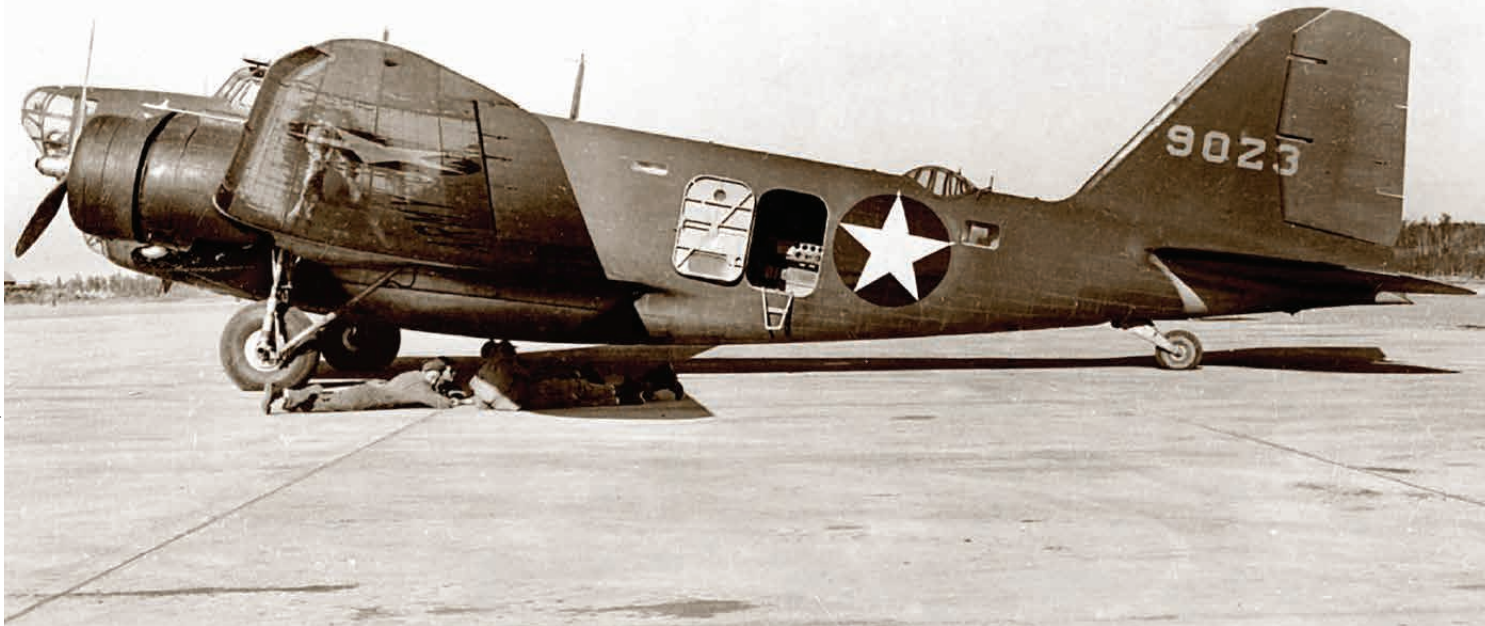
673D AIR BASE WING HISTORY OFFICE

Douglas B-18 BOLO



Model:	B-18A
Power:	Two Wright R-1820-53 nine cylinder radial engines rated at 1000 hp each
Top Speed:	215 mph
Cruise Speed:	167 mph
Range:	1150-2100 miles
Ceiling:	23,900 ft
Bomb Load:	4400 lbs
Armament:	Three .30 caliber guns in the nose, ventral and dorsal positions
Crew:	6 - pilot, copilot, navigator/bombardier, 3 gunners

UNITED STATES ARMY AIR FORCES, WOA / TED SPENCER



The B-18 Bolo was numerically the most important long-range bomber in service with the Army Air Corps at the start of the war, but it was obsolete by the end of 1941.

The Early Years of the B-18 Bomber

The origin of the B-18 can be traced back to the same 1934 Army competition that led to the Boeing B-17. The Douglas entry bore the company designation of DB-1. It drew heavily on the company's experience with its DC-2 commercial airliner. The DB-1 made its first flight in April of 1935, and was delivered to Wright Field for the competition in August of 1935. Competitors included the Martin 146, and the four-engine Boeing 299, which was eventually to emerge as the famed B-17 Flying Fortress.

Test flights proved the DB-1 to be inferior in almost every respect to the Boeing 299. However, the DB-1 did have the advantage over the Boeing design by being substantially cheaper. In addition, the crash of the Boeing 299 on October 30, 1935 caused the US Army Air Corps

to opt for the conservative approach, and in January 1936 they ordered 82 B-18s. Fortunately, the Army also ordered 13 Boeing YB-17s.

By the early 1940s, the shortfalls of the B-18/B-18A were alarmingly visible. It lacked speed and range, its bomb load insufficient and it was particularly weak in armor and armament. The US Army Air Corps agreed that it was unsuited for the long-range missions it was initially intended to perform and that the lack of protection for its crew would have been certain suicide. Even so, it was all the US had and by 1940, most US bomber squadrons were equipped with B-18/B-18A Douglas aircraft. As a result, at the time of Pearl Harbor, it was the most numerous American bomber type deployed outside the Continental United States. It would have to suffice until a

“The B-18 Bolo and P-36 Hawk constitute our present available air strength, or perhaps I should say weakness.”

– General Simon Bolivar Buckner, Commander of the Alaska Defense Forces, May 1941

more effective aircraft was developed and produced in mass numbers.

By early 1942, new and improved aircraft started to replace the Bolo as a first-line bombardment aircraft and many B-18s were then used as transports, or modified to B-18Bs for anti-submarine duty. Only 217 B-18As were built.

Service in the Aleutians

By the end of May 1941 the Army Air Forces in Alaska were still only equipped with obsolete aircraft. The Douglas B-18A Bolo had a limited range with a full bomb load of 4,400 pounds, a limited defense capability with its three .30 caliber machine guns and was vulnerable to a rear attack. Also on hand were the Curtiss P-36C Hawks with limited capabilities for a fighter against the superior Japanese “Zero.” It lacked both the speed and maneuverability of the Zero. Together the Alaska Air Force, as it stood, could do very little damage to an enemy carrier task force. General Buckner relayed these concerns to General DeWitt, terming them “our present available air strength, or perhaps I should say weakness.”

But by early 1942 the B-18s were slowly being replaced by the B-17 and later with B-26 bombers. With their combat sorties severely limited following arrival of the new bombers the B-18s began service in both training and transport roles. Its primary uses were in target towing for the 15th Tow Target Squadron based out of Adak and Amchitka, augmenting PBY submarine patrols over the Gulf of

Alaska, and as a troop and cargo transport carrier. In the Aleutians the B-18 flew well into 1944 in these secondary roles.

The B-18 was flown hard in Alaska and many were sidelined for maintenance reasons reducing the inventory of serviceable planes on any given day. Operational losses also took their toll on the B-18 fleet. On February 16, 1944, B-18 (37-630), assigned to the 15th Tow Target Squadron, disappeared on a flight from Shemya for Adak. Army and Navy aircraft conducted a search and found the wreckage of the aircraft near Kiska Volcano. All 7 crew members aboard had perished.

The B-18 and B-18A were assigned to the 73rd Bombardment Squadron of the 28th Bomb Group and the 36th Bombardment Squadron during the Aleutian Campaign.

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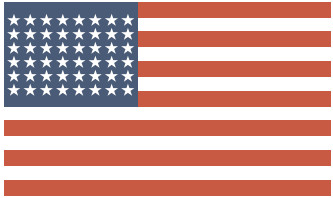
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673D AIR BASE WING HISTORY OFFICE

Consolidated B-24 Liberator



Model:	B-24D
Power:	Four Pratt & Whitney fourteen cylinder radial engines rated at 1200 hp each
Top Speed:	303 mph
Cruise Speed:	200 mph
Range:	2850 miles
Ceiling:	28,000 ft
Bomb Load:	8000 lbs
Armament:	Ten. Twin .50 caliber machine guns in the top, ball and tail turrets. Single .50 caliber machine guns in left and right waist positions, rear dorsal and in the nose.
Crew:	11 - pilot, copilot, navigator, bombardier, radio operator, flight engineer and 5 gunners

ALASKA MILITARY HISTORY ASSOCIATION COLLECTION



With over 18,000 aircraft built, the B-24 Liberator was produced in even greater numbers than the other famous World War II US bomber, the B-17 Flying Fortress.

A Bomber Mass Produced for War

The heavy, four engine B-24 Liberator served as tanker and transport as well as bomber during World War II. The B-24 was employed in operations in every combat theater during the war. Because of its great range while fully loaded, it was particularly suited for long over-water missions in the Pacific Theatre. It edged out the B-17 on most performance criteria (speed, range, bomb-load) and served well as its replacement.

With its first prototype flown in late 1939, the Liberator was the first mass-produced heavy bomber. More than 18,000 B-24s were produced—more than any other American airplane. To meet the demand, the plane was

built by several other aircraft manufactures: North American, Douglas and even the Ford Motor Company of Michigan.

The PB4Y-2 Privateer, a variant of the B-24, was redesigned for the Navy to have better performance at low altitudes. The Privateer entered Navy service during the late summer of 1944. The aircraft was stationed exclusively in the Pacific Theatre where it was used for patrol missions in support of amphibious operations during the latter stages of the war. Because of its range and versatility, the Privateer also performed a variety of other missions: searching out and destroying enemy radar, ships and other targets; reporting weather and enemy

Ford Motor Company churned out a bomber an hour, or as many as 25 planes a day, at its Willow Run plant in Michigan. By the end of the war Ford had manufactured 8,600 B-24 bombers.

positions; locating downed airmen and coordinating rescue operations.

Service in the Aleutians

One of the most illustrious chapters in the Liberator's story is its service in the Aleutian Campaign from May 1942 through the end of the war. The first B-24s to arrive in Alaska were LB-30s, a lend lease version of the aircraft initially intended for England. By mid-June they were joined by B-24 "D" models and were regularly performing hazardous long-range overwater missions to the islands of Kiska and Attu. They were the work-horses of Aleutian bombing missions. The concentration of Japanese anti-aircraft batteries at Kiska was one of the largest in the Pacific and the B-24 "D"s increased fuel load, armament and underwing bomb racks made the aircraft ideal for these operations.

By July 18th, after the US reclaimed Attu and established bases both on Shemya and Alexai point, the B-24s of the 404th, 36th and 21st Squadrons were making 1,600-mile round trip bombing missions over the Japanese homeland bases on Paramushiro and Shimushi in the Kuriles Islands. Each mission lasted 9.5 hours.

The Army Air Corp primarily received the familiar twin-tail version of the B-24. The Navy version of the Liberator, the PB4Y-2 Privateer, and the F-7 reconnaissance version equipped with cameras were also used in the Aleutians.



673D AIR BASE WING HISTORY OFFICE

The revetted Liberator, the workhorse of the Aleutians, is prepped by its crew for a mission in 1942.

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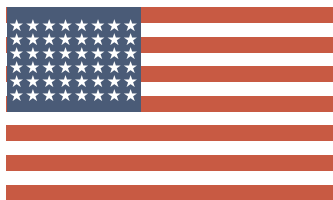
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673D AIR BASE WING HISTORY OFFICE

The B-24's twin-tail was changed to a single tail fin and rudder on the Privateer and it's armament beefed up.

North American B-25 Mitchell



Model:	B-25D
Power:	Two Wright R-2600-13 fourteen cylinder radial engines rated at 1700 hp each
Top Speed:	284 mph
Cruise Speed:	233 mph
Range:	1350–1500 miles
Ceiling:	24,000 ft
Bomb Load:	3000 lbs
Armament:	Six. One flexible and one fixed mount .30 caliber machine gun in the nose and twin .50 caliber machine guns in the dorsal and ventral turret positions.
Crew:	(5) pilot, copilot, navigator, bombardier/nose gunner, navigator/upper turret gunner and radio operator/belly turret gunner

ALASKA MILITARY HISTORY ASSOCIATION COLLECTION



The Mitchell consistently ranked as the favorite among Army Air Force pilots.

One of the Most Famous Bombers of the War

The B-25 medium bomber was one of America's most famous airplanes of World War II. It gained notoriety as the aircraft used in the famous Tokyo Raid on April 18, 1942. Jimmy Doolittle, who led the raid and later went on to become a General, spent his youth in Nome, Alaska. The "Mitchell" bomber saw duty in every combat area, being flown by the Dutch, British, Chinese, Russian and Australian pilots in addition to our own US forces. It consistently ranked as the favorite among Army Air Force pilots. More than 9,800 were built.

The bomber was named after Brigadier General William "Billy" Mitchell, a bold advocate for air power and a

pioneer in military aviation. Mitchell foresaw that an air force was essential for national survival and educated the public and its leaders on the role the airplane would one day play in national life. He also fought to have Alaska's strategic values recognized, saying in 1935, "I believe that, in the future, whoever holds Alaska will hold the world."

As with all US bombers in World War II, the development of the B-25 is marked by increasing armament, more protection, installation of self-sealing tanks, and, consequently, more weight. Until engines were correspondingly upgraded, performance inevitably suffered. Inadequate firepower in the nose and problems with gun turret installations, issues seen in many bombers, also challenged the Mitchell's designers.

“The worst thing ever designed was the bottom turret of the B-25. It was the stupidest bit of equipment. The operator...couldn’t hit a thing. What they really needed was a tail gun which they eventually installed.”

– Harold Maul, B-25 crewman

The B-25B introduced the notoriously unsuccessful Bendix ventral turret. Harold Maul, a B-25 crewman, described the ball turret: “The worst thing ever designed was the bottom turret of the B-25. It was the stupidest bit of equipment. My God, the operator is sitting in one place getting a reverse image through a mirror. He couldn’t hit a thing. It slowed the damn plane down, and we weren’t getting belly attacks anyway. What they really needed was a tail gun, which they eventually installed” (Bergerud 2000).

Service in the Aleutians

Between November 1942 and February 1943 some squadrons in Alaska began converting to the B-25. They found it to be an easier bomber to fly and had a greater range than the A-29 and B-26 pilots had been used to. The first Mitchells delivered to the Aleutians were the C and modified D models (with added firepower for low level strafing) which were later replaced with J models in late 1944. These aircraft served in the Aleutians until the end of the war.

The aircraft were used by the 406th, 77th and 73rd Bombardment Squadrons operating primarily out of Adak and Amchitka in the early years of the Aleutian Campaign, and later Attu. From December 1942 until August 1945, the squadrons and their B-25s flew roughly fifty-one bombing missions against Kiska Island, seven against Attu Island and thirty-three against the Kurils Islands. They also flew



HENRY K. KOWALSKI COLLECTION, NPS

124 anti-shipping sweeps that cost the Japanese at least 22 warships, cargo and transports sunk, seven probably sunk and thirty damaged. Their efforts accounted for at least six Japanese aircraft shot down, nine probably destroyed and thirty damaged. In return, the squadrons lost 49 medium bombers.

One of the most disastrous missions of the Eleventh Air Force occurred in September 1943. Nine B-24 crews from the 404th Bombardment Squadron and twelve B-25 crews from the 77th Bombardment Squadron took off from Alexia Point Field, Attu Island. The B-24 crews were assigned the mission of bombing the Kashiwabara Staging Area in the Kurils Islands from high altitude, 18,000 ft., while the B-25 crews were assigned the low-level mission of attacking ships in the Paramushiru Straits from 50 ft. One B-24 crew aborted the mission due to mechanical difficulties and the others continued

on. The Japanese, warned by previous bombing attacks, were prepared. They shot down one B-24 and two B-25s with the loss of all aboard. Two other B-24 crews and six B-25 crews were forced to land at Petropavlovsk, Russia because of battle damage or mechanical difficulties. Crews were interned in Russia and later allowed to escape while their aircraft were confiscated.

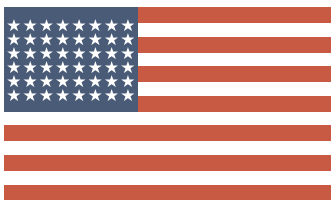
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Martin B-26 Marauder



Model:	B-26
Power:	Two Pratt & Whitney R-2800-5 eighteen cylinder radial engines rated at 1850 hp each
Top Speed:	315 mph
Cruise Speed:	265 mph
Range:	1,000 miles
Ceiling:	25,000 ft
Bomb Load:	5800 lbs
Armament:	Four. One flexible .30 caliber machine gun in the nose and tunnel position of the lower rear fuselage. One twin .50 caliber machine gun in the dorsal turret and one flexible .50 caliber in the tail.
Crew:	7 - pilot, copilot, bombardier/gunner, navigator/radio operator, 3 gunners



Early on it was dubbed the “Widowmaker” due to troubles experienced from the first delivery of the plane in early 1941. Air crews fought assignment to Marauder equipped units.

A Bomber With a Bad Reputation

In contrast to the popular B-25, the Marauder was one of the most controversial American combat aircraft of World War II. Its high landing speed of 130 mph and ornery behavior with single-engine operation made it a challenge for new pilots to make the leap to the cockpit. It demanded somewhat of a higher standard of instruction than the B-25 Mitchell. Once mastered, however, the B-26 offered a level of operational immunity to its crews unmatched by any other aircraft in its class.

An increasing accident rate prompted an investigation by a US Senate Committee chaired by Senator Harry S. Truman. The poor safety record was enough to convince the committee to recommend a halt in production of the bomber. But veteran pilots saw the worth of the airplane

and the Air Force was able to trace the aircraft’s accident rate back to the inexperience of both aircrews and ground crews as well as to the overloading of the aircraft.

The Army, along with Martin, began a new program of pilot training in the aircraft. Within a month of the program’s inception, accidents at training fields began to fall off. With the drastic improvements in its safety record, the Truman Committee finally relented and stopped demanding an end to Marauder production. Nevertheless, the derogatory nicknames still persisted. Word had not gotten down to the grass roots level that the problems with the B-26 had been identified and corrected. Student pilots still believed the popular legend that the B-26 was a deathtrap, and very few graduates requested assignment to a B-26 group.

“My checkout in the B-26 was four take-offs and four landings without leaving the traffic pattern and they said, “You are now a B-26 pilot.” “And a lot of things went that way in the early days of the World War II.”

– Capt. John Pletcher

Service in the Aleutians

The B-26 first arrived in Alaska in January of 1942. Of the original fourteen to leave Sacramento Air Depot along with the 11th FS, only nine would complete the entire 2,300 mile trip to Elmendorf Field in Anchorage—a preview of the difficulties that lay ahead. With its tricycle landing gear and high landing speeds, the Marauder was not ideally suited for the primitive airfields ahead of them. Despite this, the B-26 served as a combat aircraft in the Aleutians for a little over a year but continued in service throughout most of the war in various capacities. Beginning in January 1943, it was replaced by the North American B-25 Mitchell. The Mitchell proved to be a superior aircraft for the Aleutian environment and it immediately began to take over the medium bomber duties in the Pacific Theatre. Admittedly, the B-26 could take greater punishment, was defensively superior, and could fly faster with a heavier bomb load. However, the B-25 was more forgiving; it had better short-field characteristics, and minimal maintenance requirements. Consequently, it was decided to adopt the B-25 as the standard medium bomber for the entire Pacific Theatre, and to use the B-26 exclusively in the Mediterranean and European theaters where the aircraft proved its worth.

Shortfalls aside, the Marauder still proved useful while in service along the chain. Because of the nature of operations in the Aleutians where extended overwater flights were the norm, the B-26's limited



673D AIR BASE WING HISTORY OFFICE

range relegated it to anti-submarine patrols and training missions while stationed on Umnak early on. That changed once the new airfield on Adak was finished in September 1942.

Over the next four months, the B-26s began to see their fair share of operational flying and combat missions over Kiska and Attu. On November 27, 1942, Aleutian Island veteran pilot Captain John Pletcher of the 73rd Bombardment Squadron narrowly escaped a barrage of Japanese anti-aircraft fire on a mission over Imperial Japanese Army occupied area of Gertrude Cove, Kiska. The group of four B-26s were instructed to go in low over their target, the Japanese transport vessel *Borneo Maru*. On the approach, a piece of Japanese artillery came ripping through the hinge point of the nose wheel, piercing the skin of the aircraft then through the upholstery of the cockpit severing the wires leading to the co-pilot control box just inches from the pilot's

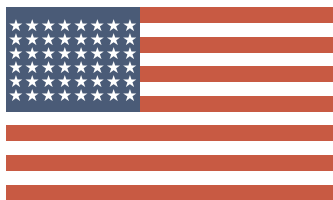
right elbow. It was not until they landed on Adak that they realized they had two-12 inch diameter holes in the side of their fuselage. Not all of his comrades were so lucky, though. On October 15th, 1942, Lieutenant Ralph D. O'Riley's B-26 was hit by anti-aircraft fire over Gertrude Cove, while also on a mission to destroy the *Borneo Maru*. The hit broke the right wing and the aircraft crashed into the water killing his entire crew.

The fact that only a handful of B-26s were lost in this theater, most of those due to combat-related action, is a testament to the ruggedness of the plane and the skills of the pilots like John, who flew them in Alaska. The B-26 would see its last combat mission in the Aleutians on January 18, 1943.

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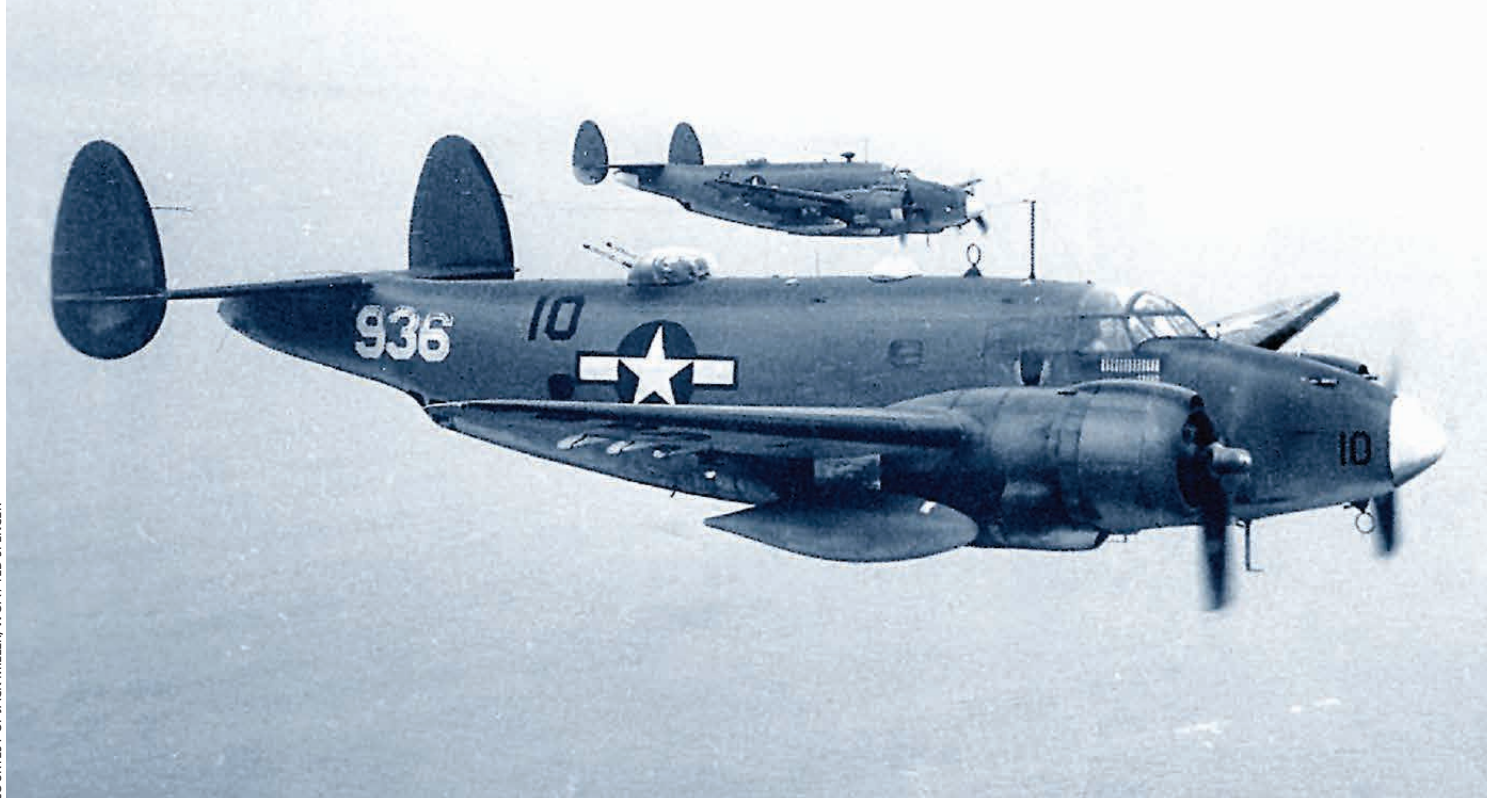
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Lockheed PV-1 Vega Ventura



Model:	PV-1
Power:	Two Pratt & Whitney R-2800-31 eighteen cylinder radial engines rated at 2,000 hp each
Top Speed:	312 mph
Cruise Speed:	170 mph
Range:	1660 miles
Ceiling:	26,300 ft
Bomb Load:	3000 lbs in the bomb bay and two underwing mounted 1000 lb bombs.
Armament:	Six. Two fixed .50 caliber machine guns in the nose, two in the forward dorsal turret plus two .30 caliber machine guns in the rear ventral turret.
Crew:	5 - pilot, copilot (optional), navigator/bombardier, radio operator/gunner, gunner

COURTESY OF JACK MILLER, WOA / TED SPENCER



The PV-1 had its origin in a deal cut in mid 1942 between the Navy and the Army Air Force.

An Old Design, Made New

When the US Navy started its war-ending drive straight across the Pacific, it had the Ventura among its arsenal. The capable, high performance, light bomber was hardly a new airplane. The development of the PV-1 first began in 1940 with the desires of the Lockheed Aircraft Company and the Royal Air Force to add a new and improved medium bomber to their fleet. The Vega (a Lockheed subsidiary) Ventura and its many variations leading up to the PV-1, was the military re-design of the commercial airliner, the Lockheed Lodestar, designated the Model 18. It was a step up from the rugged Lockheed Hudson that had been around since before the war began.

For the United States, the Lockheed Vega PV-1 was the result of a mid-1942 agreement between the US Navy

and Army Air Force when the USAAF was still flying anti-submarine patrols in the Atlantic and North Pacific. At the time, the Navy was still relying on their amphibious aircraft to perform its anti-submarine warfare. History had proven that seaplanes ultimately lacked armor and armament and were therefore vulnerable to attack by enemy fighters. As a result, the Navy was looking to acquire a long-range land-based heavy maritime reconnaissance and patrol aircraft capable of carrying a substantial bomb load and could effectively protect itself.

The Army Air Force had been using a variation of the Ventura, Model B-34 Lexington, since the fall of 1941, mostly for training or observation purposes. Negotiations between the Navy and the USAAF began in summer of 1942, when the Navy requested use of some B-24s

“I cannot imagine trying to fly one of those planes on one engine under instrument conditions. Perhaps that would account for many of the ‘failed to return’ reports.”

– Franklyn Dailey Jr., Triumph of Instrument Flight, Dailey International Pub., MA

(PB4Ys) and B-25s (PBJs). Ultimately, the request was granted. The Air Force also agreed to stop any further procurement of the B-34 so that Lockheed Aircraft company could focus its attention on developing a navalized version, the PV-1, complete with an increased fuel capacity for over water flights, modified bomb bay to accommodate 3,000 lb bombs or six 325 lb depth charges or a torpedo, an AN/ASD-1 airborne radar and eight zero-length high velocity attack rocket rails under the wings.

For the US Navy, this was the real win. The same day the agreement was signed, July 7th, 1942, they ordered 200 of them. By the end of 1942, the US Navy PV-1 were being mass produced and the first ones, were destined for the Aleutians. They would arrive in May 1943.

Service in the Aleutians

In January 1943, the two original Patrol Wing Four Navy squadrons in Alaska, VP-42 & 42, were decommissioned a PBY squadron and recommissioned VB-135 & 136 each equipped with fifteen brand new PV-1 Venturas. This new Navy medium bomber included the advanced ASD-1 radar system, a critical asset in the unpredictable Aleutian weather.

The Ventura's first major role in the defense of Alaska was in June 1943 when the radar directed bomber began to lead formations of B-24s on strategic bombing runs over Kiska from Amchitka. By August 10th, now based out of Casco Field on

Attu, the Ventura's began routine sector maritime reconnaissance patrols extending over 500 miles south, west and northwest of Attu.

After the reoccupation of Kiska and Attu, the focus shifted to the Japanese forces located in the Kuriles Islands. Commander Gehres wanted his Navy units to be more involved and by January 1944, a series of modifications—which included the addition of a full set of instruments to the co-pilot seat, an extra fuel tank and reconnaissance camera equipment—proved the Navy bomber more than worthy of a combat role. VB-139 Squadron, called the “Bats,” and their PV-1s began carrying out strikes against Shimushu and Paramushiro, the northernmost Japanese island in the Kuriles chain. These 1,600-mile round trip strikes continued until May 1945.

In June 1944, the first Navy crew to be interned in Russia were two PV-1 crews from VB-135. Six PV-1s departed for a daylight strike to destroy “Sally” bombers sited on Miyoshino Airstrip while a sixth PV-1 flew a daylight photo-reconnaissance mission along the east coast of Shimushu and Paramushiro Islands. Japanese fighter pilots attacked the bombers, damaging two and forcing the crews to land at Petropavlovsk, Russia where their aircraft were confiscated and crews interned. In the end, over 230 Navy/Army airmen spent time in Russia waiting out the war.

Also notable, for a short while, the Royal Canadian Air Force 149 Torpedo Bomber Squadron



JOE BALDESCHI COLLECTION, NPS

stationed on Annette Island in southeastern Alaska, had 11 Vega Venturas GR MK Vs which was the British designation for the US Navy's PV-1 Ventura. They were part of Canada's Western Air Command “Y” Wing and sent to Alaska just before Operation Cottage, the Allies' invasion of Kiska which officially ended the Aleutian Campaign.

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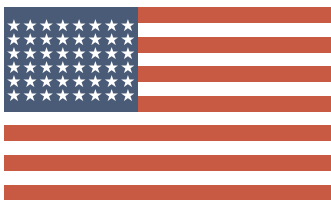
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Lockheed PV-2 Vega Harpoon



Model:	PV-2
Power:	Two Pratt & Whitney R-2800-31 eighteen cylinder air cooled engines rated at 2000 hp each
Top Speed:	282 mph
Cruise Speed:	171 mph
Range:	1790 miles
Ceiling:	23,900 ft
Bomb Load:	Four 1000 lb bombs or one torpedo plus two 1000 lb bombs under wings.
Armament:	Nine. Five .50 caliber machine guns in the nose, two in the dorsal turret and two in the rear ventral turret.
Crew:	4 - pilot, navigator/bombardier, radio operator/gunner, dorsal turret gunner

COURTESY OF JACK MILLER, WOA / TED SPENCER



This work horse of the air was designed as an extended range replacement for the PV-1 Ventura.

The Little Sister of the Ventura Gains a Bad Rap

Designed as an extended range replacement for the PV-1, the Lockheed PV-2 Harpoon officially entered military service in mid 1945. It was used across the Pacific by both the Navy and the Marines as a bomber, patrol bomber, and attack aircraft.

The bombers normally operated without fighter escort due to their ability to adequately defend themselves. In the Pacific, they were used as a close air support plane. With up to nine .50 caliber machine guns mounted in the nose, under wing rockets, and up to 4000 pounds in bombs, the PV-2 proved a powerful weapon against the enemy. Its larger wing provided greater fuel carrying capacity but added to its weight.

The PV-2 was designed with an increased wing area and expanded load-carrying capabilities, than its predecessor but the extra payload came at the cost of speed, however, and the Harpoon was never able to live up to the “hot rod” reputation of its sister PV-1. In addition, wing and engine deficiencies served to further taint its reputation. During testing of the aircraft, it was discovered that the wings had a tendency to wrinkle dangerously with an increased load and there was no quick fix. A total redesign of the wing was necessary and delayed delivery of the aircraft until close to the end of the war.

An important measure of aircraft performance in the Pacific Theatre was its ability to outmaneuver or escape the Japanese Zero. When confronted by a Zero, the Harpoon had sufficient power to outrun the Zero but it came at

Because of a dangerous tendency toward wing failure, with no simple solution, the PV-2 would not enter combat until March 1945.

a high cost. Sustained high power settings usually resulted in a costly and time consuming engine change if the escape was successful. The problems with weak spars also made this tactic dangerous.

By the time deficiencies were corrected, the war was coming to an end and consequently the Harpoon saw little combat duty. The contract for Harpoons was cancelled by war's end. Only 500 were produced.

Service in the Aleutians

Fleet Wing Four's VPB-139 officially took the first six PV-2 Harpoons into combat, under the command of Lt. Commander Glenn A. David, arriving at Casco Field on Attu from Ault Field on March 3rd 1945. VPB-139 replaced VPB-136 after serving as the longest of any PV-1 squadrons in the Aleutians.

Due to the reduction in bomb load, the PV-2 was used for rocket and strafing attacks and occasional bombing missions along the 700 mile route from the Aleutians to the Kuriles which became known as the "Empire Express." The "Empire Express" continued with daylight and night bombing raids, using both the Venturas and the Harpoons until the end of the war.

The Harpoon was also flown by VP-131, VP-135, and VP-136 squadrons in the Aleutians, and losses of personnel and aircraft were few in the missions flown by the Harpoon. The unforgiving Aleutian weather did claim its share though. On average only a third of the planned missions were executed due to poor weather. For example, in May

1945, 62 missions were scheduled, only 22 were flown: 25 missions returned due to poor weather and 15 were cancelled due to weather.

Pilots and crews were fortunate if they were able to turn back before poor weather enveloped them or their base. Late in March, a VP-139 Harpoon was lost by fire as the pilot attempted to land on Shemya, unable to return to his own base due to weather. Fortunately the crew was saved. Then, in April 1945 three Harpoons from VP-139 departed Attu for a routine sector patrol. After two hours the planes were recalled due to deteriorating condi-

tions. Only two returned—the third plane disappeared without a trace.

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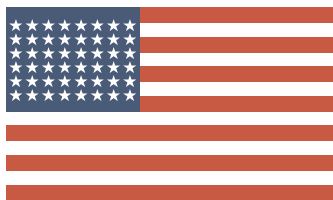
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673D AIR BASE WING HISTORY OFFICE

Lockheed A-29 Hudson



Model:	A-29
Power:	Two Wright R1820-87 nine cylinder radial engines rated at 1200 hp each
Top Speed:	250 mph
Cruise Speed:	205 mph
Range:	2800 miles
Ceiling:	26,500 ft
Bomb Load:	750 lbs
Armament:	Three. Two .30 caliber machine guns in the nose and one .50 caliber machine gun in a flexible dorsal position.
Crew:	5 - pilot, navigator, bombardier, radio operator and gunner

UNITED STATES ARMY AIR FORCES WOA / TED SPENCER



The reliability of the Hudson earned it the nickname "Old Boomerang" because it always came back.

Forefather of the PV-1

In service, the Hudson was practical, popular, and surprisingly effective for a converted civil aircraft designed around the Lockheed Model 14 Super Electra. The American built light bomber and coastal reconnaissance aircraft was one of Lockheed's first aircraft built for the Royal Air Force in 1939. Britain's manufacturing plants had reached capacity and they were looking for an American company who could fill the role.

The Hudson would see many revisions though its service. A majority of these planes were used by the RAF but some also went to the Australian Air Force, Royal New Zealand Air Force, China Air Force, Royal Canadian Air Force, and particularly the US Army Air Corps, which

reclaimed 153 Hudsons for use early in World War II.

In 1941, the US began operating the Hudson Model A-29 MKIII which was the US Military designation and were part of the lend lease versions intended for the RAF. Of the 414 planes, 153 were diverted and assigned to United States coastal defense units. Some A-29s were assigned to anti-submarine patrol squadrons and at least one submarine was sunk in the summer of 1942. They were soon replaced by more modern, capable aircraft and were then reassigned to second line duties. A-29s were used for air crew training, liaison, light cargo and staff transport roles.

The US Navy also received 20 A-29s and redesignated them PBO-1 for use in Patrol Bomber missions. The

After repeated requests, General DeWitt received additional aircraft: A-29s and B-26s. Ironically, these aircraft lacked the range to reach Kiska from their base on Umnak Island and were of no use in expelling the Japanese invaders.

reliability of the Hudson earned it the nickname “Old Boomerang” because it always came back.

Service in the Aleutians

The A-29 equipped 406th Bombardment Squadron were deployed from Paine Field, Washington to Alaska on June 2, 1942, just days before the opening salvos of the Aleutian Campaign. They were in the process of transitioning to the B-25 when they received the message to leave at once. The squadron’s training came to a halt and instead, 10 additional A-29s were added to their fleet of 6 A-29s and 4 B-18s as they quickly began preparation for deployment. Upon arrival, General Butler, the Commander of the Eleventh Air Force, was disappointed to learn they had not yet received their B-25s and realizing the A-29s lacked the range to get into enemy territory over Kiska, assigned them to anti-submarine duty with detachments across the state, south in Yakutat, west in Naknek and north in Nome.

By early winter, some had moved over to Cold Bay and Thornborough Field where they operated until May 1st, 1943 flying shipping escorts, patrols. Kodiak Island would also see a detachment of Hudsons through the summer of 1943 before being pulled out to support the Kiska mission. Early on, the B-26s assigned to the 73rd and 77th Bombardment Squadrons and the A-29s assigned to the 406th Bombardment Squadron based at Cape Field on Umnak Island all lacked the range to reach



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Kiska. As a result, they were instead relegated to anti-submarine patrols and training missions.

The 406th squadron began converting from A-29s to B-25s beginning in February 1943, but the reality for them was that the supposed thirty days of temporary duty stretched into seventeen long months. Incidentally, they were also the only US Eleventh Air Force combat flying unit that did not experience any fatalities.

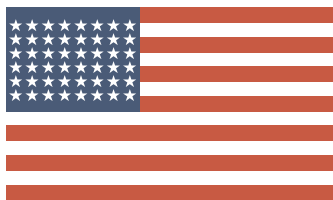
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Douglas A-24 Banshee



Model:	A-24
Power:	One Wright R-1820 nine cylinder radial engine rated at 1000 hp
Top Speed:	250 mph
Cruise Speed:	173 mph
Range:	950 miles
Ceiling:	26,000 ft
Bomb Load:	1200 lbs
Armament:	Three. Two .50-cal fixed machine guns in the nose and twin .30 caliber flexible machine guns in the rear.
Crew:	2 - Pilot, observer/gunner

UNITED STATES ARMY AIR FORCES, WOA / TED SPENCER



"Slow but deadly" was the motto adopted for the A-24 Banshee and its naval equivalent, the SBD Dauntless dive-bomber, but only when pilots were trained well on how to best utilize the aircraft's capabilities.

Land Relative of the SBD

The Douglas Dauntless A-24 Banshee is a lesser-known dive-bomber used by the US Army Air Force during World War II, although with much less success and notoriety than its legendary Navy counterpart, the Douglas SBD Dauntless dive-bomber.

After the memorable victories of the German dive-bomber, Junker Ju 87 Stuka, the Army Air Force was feeling the need to develop its own counterpart. Because time is of the essence in a period of war, they decided to accelerate the process by converting the Navy's already proven SBD-3s, designating them A-24s. The main differ-

ence between the two was the removal of the tail hook and the addition of a large pneumatic tailwheel. The first deliveries of the Air Force's Banshees began after the summer of 1941.

The Navy had a long-standing history of using dive bombers that dated back to the early years of naval aviation and thus had established effective systems for training pilots on how best to use the aircraft. The Army Air Force did not have similar training systems, a factor commonly cited in regard to the Banshee's success or lack thereof.

The Navy's SBD, designed after the Northrop BT-1,

entered service in 1940, first with the Marines then followed by the Navy and was considered the primary weapon in the US war effort in the Pacific. Three days after Pearl Harbor an SBD was credited with the destruction and subsequent sinking of the first enemy warship, Imperial Japanese Navy submarine I-70. It also saw much success with its first major combat engagement during the Battle of the Coral Sea and later during the Battle of Midway.

As with many aircraft, the SBD was scheduled to be replaced by the newer, faster and “latest,” in this case, the Curtiss SB2C Helldiver. What they found, though, was that the SBD was still favored for its ease of flight and effective striking capabilities. It continued to be used effectively in Naval service until mid-1944.

As for the Army Air Force A-24 Banshees, by mid-1942, they had been relegated for use as pilot trainers or were posted to low-risk combat areas of the Pacific for inshore patrol duty or tasked with pestering Japanese bases and shipping routes.

Throughout the war, the Army Air Force received over 700 A-24s (SBDs-3,4, and 5) for use in service.

Service in the Aleutians

At the conclusion of the battle of Attu, General Butler, Commander of the Eleventh Air Force, was preparing for Operation Cottage, the invasion of Kiska, scheduled to take place August 15, 1943. To strengthen the Allied air assets, the 407th Bombardment Squadron (Dive) was deployed to Alaska from sunny Drew Field, Florida with 17 Douglas A-24 dive-bombers.

On August 4, they got their first glimpse of the action when they participated in some of the heaviest aerial bombardment of the campaign over Kiska Island. Based out of Amchitka, the newest Allied



Douglas A-24 Banshee at the National Museum of the United States Air Force, Wright-Patterson AFB.

airfield located just 50 miles east of the target, the A-24 Banshees carried their maximum bomb load as they flew 16 sorties over the island, scoring direct hits on anti-aircraft positions in the main area of the camp. In the short time the 407th Squadron was in the Aleutians, they lost two A-24s during their engagements over Kiska Island. Later, it was discovered that the Japanese had already abandoned Kiska by the time the A-24s bombed the island.

The US Navy also brought their naval version of the dive bomber, the SBD Dauntless, to the Aleutians, with the first four landing on Attu, December 2, 1944. They served with Navy patrol squadron VS-48 and their arrival indicated the beginning of more to come. Overall, 12-18 SBDs replaced all of

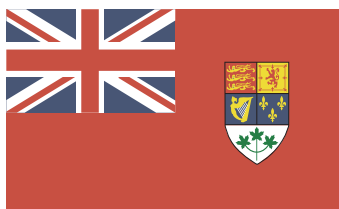
the 59 Kingfishers along the chain, with detachments located at Kodiak, Dutch Harbor, Adak, Amchitka, and Attu, where they were utilized not for their bombing abilities but more for inshore sector patrols of the surrounding areas. In 1945 the dive bombers began switching over to the Navy's latest: the SBW-4, a Canadian Car & Foundry version of the SB2C Helldiver. They remained in Alaska until the end of the war.

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Bristol Bolingbroke IV



Model:	Bolingbroke
Power:	Two Bristol Mercury XV nine cylinder radial engines rated at 920 hp each
Top Speed:	262 mph
Cruise Speed:	214 mph
Range:	1950 miles
Ceiling:	28,400 ft
Bomb Load:	1000 lbs
Armament:	Five. One fixed forward firing .30 caliber machine gun in port wing and in the nose; two .30 calibers in the dorsal turret; and one fixed .30 caliber rear firing under the nose.
Crew:	4 - pilot, navigator/bomb aimer, wireless operator, and gunner



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A new and improved Canadian version of the Bristol Blenheim IV.

Canadian Bombers Join the Fight in the North Pacific

The Bristol Bolingbroke was a Canadian built version of the light British bomber, the Bristol Blenheim IV. The Blenheim was a militarized version of the civilian prototype, Bristol 142, manufactured by Bristol Aeroplane. This modern new bomber was officially delivered to the Royal Air Force by March of 1937.

By September 3rd, 1939, just hours after the initial declaration of war, the RAF Blenheims from 139 Squadron were conducting the first photo reconnaissance sortie of the Second World War. The next day they were bombing enemy warships. Originally built to replace the Avro Anson, this two-engine coastal patrol plane was utilized in a variety of roles throughout its service and remained

active into 1942 allowing Britain's Bomber Command to carry out offensive operations over Europe. They also saw action in North Africa and the Middle East. Eventually, the Blenheim was replaced with a more advanced bomber, the Lancaster.

In Canada, the Blenheim was manufactured by Fairchild Aircraft Limited in Longueuil, Quebec as early as 1937 but was given the name Bolingbroke. Affectionately dubbed the "Boly" by those who flew it, it was the first modern, all-aluminum stressed-skin constructed aircraft manufactured in Canada. Through its lifetime, three versions were developed including one on floats. The "Boly" had a longer range than the Blenheim, perfect for the long Canadian coastal patrols, and was fitted with rubber de-icing boots on the wing and tail surfaces. A total of 626

The Bolingbroke's service in the Aleutians would not go unnoticed. None of its aircraft had been lost on patrol, a feat unequalled by any other Squadron in Alaska.

Bolingbrokes were delivered to Canadian bomber squadrons between December 1939 and September 1943, a majority of which ended up as operational trainers under the British Commonwealth Air Training Plan at various RCAF stations in Canada. The only active combat role these aircraft saw was during the Aleutian Campaign.

Three Bolingbroke squadrons were assigned to Canada's Western Air Command and the defense of the west coast and by June of 1942 the Bolingbrokes were patrolling the surrounding waters off Alaska.

Service in the Aleutians

In response to the US military's urgent need for air support, the first RCAF Bolingbroke squadron touched down on Annette Island on May 5, 1942.

No. 115 Fighter Squadron, later redesignated a Bomber Reconnaissance Squadron, was dispatched to the southeastern tip of Alaska to provide air cover to the newly established US Naval Base at Prince Rupert in British Columbia, Canada. The US Navy was using Prince Rupert as a staging base for supplies and troops heading north. Prince Rupert did not have the land for a runway so it was suggested that the Canadian Squadron use Annette Island, where a small US Army contingent was already established. This became the first time an Allied force had ever set up a base on US soil.

In May, after intercepting the Japanese code indicating that an attack on Alaska was imminent, the RCAF's Western Air Command relinquished an additional bomber squadron to support opera-

tions in Alaska. On June 3, 1942, 8 Squadron with their 10 Bolingbroke bombers left their base at Sea Island, BC (Vancouver) and made their painful way through bad weather using inadequate maps. They refueled at Annette Island, Yakutat and finally Juneau, where they were informed that the Japanese had bombed Dutch Harbor. As a result, General Buckner immediately requested a patrol of the surrounding waters of Juneau for enemy submarines.

Finally, in Anchorage, the US command tasked 8(B) Squadron and its Bolingbrokes with conducting patrols to protect the critical lines of communication from the Japanese. The Bolingbrokes patrolled the Gulf of Alaska and Bering Sea and had detachments in Nome, Kodiak and Anchorage. In fact, the "Bols" stationed at Marks Field in Nome assumed the entire responsibility for flying patrols over the Bering Sea and Norton Sound until their departure.

In the end, the range limitations and the severe shortages of parts hindered the overall effectiveness of the Bolingbrokes. By the end of 1942, the US requested that they be replaced by a fighter unit. The Canadians obliged, and by the spring the Bolingbrokes were safely back at Sea Island and 14 Fighter Squadron was now in the Aleutians as their replacement.

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RCAF HISTORY & HERITAGE OFFICE



The Allied Fighters

Allied Pursuit/Fighter Aircraft

The life of a fighter pilot was that of a waiting game; never knowing when the enemy would attack or never knowing where. The orders to intercept bombers were often followed by sheer chaos as pilots scrambled to their airplanes, racing into the sky only to meet an overwhelming enemy threat accompanied by an atmosphere of tension and nervousness as there was a fairly high risk that he may not live beyond that mission.

In the Aleutians, fighter pilots were busy strafing, bombing, hunting for aerial kills and protecting friendly aircraft, airfields, supply lines and troops. But the ground crews were just as busy trying to make sure the aircraft they had generously loaned to their pilots were on the line each day and ready to bring them home. This was no easy task as supplies were hard to come by. Ingenuity was a must for the mechanic. There is never enough credit given to these men who worked ten hours for every hour the pilot flew.

In its offensive role, pursuit/fighter aircraft either accompany bombers to afford close protection on the way to and from the objective, or penetrate ahead of the bombers to assure protection over the target. As bombers began to fly faster and farther and were made capable of defending themselves, some argued that an escort was no longer necessary. But the pursuit aircraft were more agile than the bombers and proved their worth as the bombers defense systems were not enough.

In the Aleutians, pursuit/fighters were at a distinct disadvantage. At the start of the Aleutian Campaign there were no airstrips available beyond Umnak Island. Most fighters at the time were single engine aircraft. Pilots had to face flying over hundreds of miles of open water, with no fuel supply, between Umnak and the invading Japanese forces on Kiska and Attu. Later in the campaign, airstrips were completed on Adak and Amchitka, placing the deployed fighter squadrons within 70 miles of Kiska.

Left: 343rd Fighter Group Commander Jack Chennault congratulates Lt. Kenneth Ambrose after a successful mission claiming a Mavis Flying Boat. Jack was a good leader and was well liked and respected by those who served under him.

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Curtiss P-36 Hawk

Lockheed P-38 Lightning

Bell P-39 Airacobra

Curtiss P-40 Warhawk

Grumman F4F Wildcat

P-40E Kittyhawk

Advice to Fighter Pilots

*This is a tale of my buddy Dave,
Who is training to make the Japs* behave
He flew a forty for Major Chennault,
A damn good leader without a fault.*

*Well, the colonel had said, in all good faith,
Rely on your speed and you will be safe.
Attack the Japs from out of the sun,
And if you miss, just turn and run.*

*So old Dave did, without a worry,
He missed his mark, so turned in a hurry,
Then looked back so he could see,
Just how far back the gap might be.*

*Well, it wasn't hard for him to tell,
About two hundred yards and coming like hell.
The Zero was gaining and spitting lead,
And the tracers were flying 'round old Dave's head.*

*Over the radio he called his flight,
And told them about his terrible plight.
But no one heard his frantic call,
And no help came to Old Dave at all.*

*So straight for the field he started to sail,
With the Jap still hanging on his tail.
Over the anti-aircraft he left the Jap,
And the gunner there blew him off the map.*

*Now, Old Dave can see a lone wolf will fail,
And flies with a buddy protecting his tail.
Together we can win, alone we'll fall,
That's Dave's advice to one and all.*

Written by First Lt. Jake Dixon, 11th Fighter Squadron, about 1st Lt. John S. Davis, also a member of the Eleventh Air Force.

Note: The word "Jap," now considered derogatory, was in common use during WWII by both military and civilians in the United States and Canada. It is preserved in this poem and in the one on page 115 to document its historical use.



Major Jack Chennault, eldest son of famed General Claire Chennault, went on to become the first commander of the 343rd Fighter Group. Here he stands in front of the 11th FS "Aleutian Tiger." The nose art was designed by Edward Lange and Gerald Webber, a tribute to his famous Fighting Tiger father.

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“Never before have United States Forces attempted this type of action. The employment of fighter aircraft under these conditions is new. Upon successful completion of your missions may you rest the reputation of the Air Forces —if not in the eyes of the world certainly in the eyes of the infantry who will be looking at you for help.”

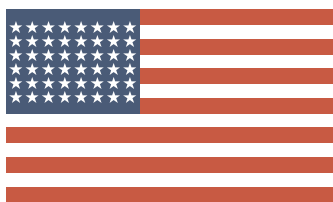
– General Jones, Post Commanding General at Amchitka, to a group of fighters from the 54th Squadron
from History of the 54th Fighter Squadron (n.d.)



RCAF HISTORY AND HERITAGE OFFICE

“In the early days of the campaign, there were no hangers. The vast remoteness of this theater necessitated airmen in all areas to be resourceful, especially mechanics who had the important role of keeping the machines functioning despite conditions.” –14 Squadron, RCAF on Umnak

Curtiss P-36 Hawk



Model:	P-36
Power:	One Pratt & Whitney R-1830 fourteen cylinder radial engine rated at 1200 hp
Top Speed:	313 mph
Cruise Speed:	200 mph
Range:	615-1010 miles
Ceiling:	32,700 feet
Armament:	Two .30 caliber or two .50 caliber wing mounted machine guns
Crew:	Pilot



The Hawk was only produced in limited numbers and had rather lackluster performance compared to its contemporaries.

First of a New Generation of Fighter

The P-36 Hawk developed by Curtiss Wright was one of the first generation of monoplane fighters to enter service with the US Army Air Corps in the spring of 1938. France and England also used the Hawk over the skies of Europe against its rival, the Messerschmitt Bf 109 and the Hawker Hurricane. Its fighting power, just two cowl-mounted .30 caliber machine guns, did not measure up in comparison. A predecessor of the Curtiss P-40, the aircraft was only produced in limited numbers. Nonetheless it would serve as the principal US Army Air Force fighter until 1941. A handful of P-36s were scrambled during the attack on Pearl Harbor claiming three aerial victories during the combat. By early 1941, the P-36 was already recognized as being obsolete and had been largely supplanted by such aircraft as the Bell P-39 Airacobra and the Curtiss P-40 Warhawk. At home, the P-36s were largely relegated to training units—except in Alaska.

Service In the Aleutians

The P-36 became part of a fleet of obsolete aircraft at the disposal of the Army Air Force in Alaska. In early February 1941, the 18th Pursuit Squadron, later redesignated a fighter squadron, began their northward movement out of Hamilton Field, California. Their 20 aircraft were disassembled, greased and crated before being loaded onto the US Army Transport *USS Chirikof* bound for the port of Seward. From there, the men, their packaged P-36s and all the equipment were loaded on railcars for the remainder of the 120-mile trip into Elmendorf Air Field in Anchorage.

The 18th was the first Air Corps unit to be assigned to Alaska and it was evident by then how little base development was in place. They were greeted with the bleak reality of a frozen base, partially constructed hangars and bitter cold in which to reassemble the machines which would help them defend North America.

“Our formations were a mixture of P-40s and P-36s and of course anytime we went into a dive, the P-40s went forward and we, in the 36s, seemingly back up.”

– Bob Brocklehurst, 11th and 344th Fighter Squadron

“Everything was cold: the hangar, the barracks and the flight line. Fingers, ears and faces froze and life was generally miserable.”

– Howard D. Nelson, 18th Fighter Squadron

The first P-36s were airborne by March but had limited range and lacked bomb racks. Major Davis, who later went on to the rank of Colonel and Chief of Aviation for the Alaska Defense Command, noted that this aircraft coupled with the also obsolete B-18 Bolo could do very little damage to an enemy carrier task force.

Not long after it arrived in Alaska, the Hawk gained a bad reputation when it suffered its first fatal accident. Lieutenant William A. Anderson was leading the third two-plane element in a flight of nine P-36s. They were conducting dive training attacks using a rock as a target near the Kenai Peninsula. The formation encountered severe turbulence which scattered them. When they reassembled, Lieutenant Anderson's P-36 was missing. His body was never recovered. Colonel Davis ordered a full inspection of all the aircraft after the accident. Upon investigation, they discovered several with major wing damage. Colonel Davis later reported: “The boys have lost their faith in the ruggedness of the P-36s.”

The beginning of 1942 would bring some relief to the ill-equipped P-36s. The 11th Fighter Squadron arrived with P-40Es fresh from the depot. The two squadrons split up ensuring each unit had a mix of



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seasoned Alaskan pilots and experienced P-40 pilots. Each coached the other on the nuances of flying in Alaska, in an effort to minimize the loss of their precious aircraft and men. They were discovering that Alaskan flying was a difficult and dangerous occupation, one that had to be mastered in order to survive.

“I don’t remember his name. But, of those of us who were here early enough to become acquainted to Alaska Flying conditions, most survived. The boys who came directly from sunny California, and the other states where the weather

wasn’t so bad sometimes didn’t even get a chance to learn how to cope with the situation.”

– Joe Schneider

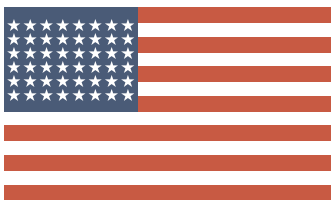
Eventually, both the 18th and 11th Fighter Squadrons had their P-36s replaced by P-38s and P-40s but the Hawks remained in the Aleutians and were used to help pilots build flying experience.

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Lockheed P-38 Lightning



Model:	P-38E
Power:	Two Allison V-1710-27/29 inline engines rated at 1150 hp each
Top Speed:	395 mph
Cruise Speed:	275 mph
Range:	850-1750 miles
Ceiling:	39,000 feet
Armament:	Four .50 caliber machine guns and one 20 mm cannon
Crew:	Pilot

COURTESY OF JOHN GEDDES, WOA / TED SPENCER



When the unique attributes of the Lightning were used to best effect, the results were devastating.

The Rugged Forked-Tail Devil Debuts in the Pacific

The Lockheed P-38 Lightning was the most successful twin engine fighter ever produced. With its two turbo supercharged engines mounted on twin booms and the pilot's separate cockpit in between, the P-38 looked like no other plane. The Germans quickly named it the "fork-tailed devil." Lockheed's chief engineer Hal L. Hibbard and his then assistant Clarence "Kelly" Johnson created the plane in response to a 1937 Army specification for a high-altitude interceptor that could reach 20,000 feet in 6 minutes. With the engines of the era, this was quite a challenge, and the innovative and formidable P-38 design resulted.

The Lightning's versatility remained unmatched through the war. It could sink a ship, strafe enemies on the ground,

immobilize tanks, fly long range and shoot down enemy aircraft in all theaters of combat, but it was most ideally suited for the Pacific Theatre. By the time it appeared in force in the Southwest Pacific in mid-1943, it had proved to be a devastating fighter.

The P-38 Lightning possessed range significantly better than the P-39s, P-40s and P-47s and its twin engines offered additional security when operating over long stretches of water. Missions lasting 9, 10, or even 12 hours were routine. The Lockheed aircraft proved to be extremely rugged and could take a lot of battle damage and still keep flying; many wounded Lightnings were able to limp home on only one engine.

Although the maneuverability of the Lightning was inferior to that of its nimble Japanese opponents, its per-

“When I taxied off the runway and onto the ramp, shut down the engines, I was shaking so hard I could hardly get out of the cockpit.”

– John Larson, pilot. *“Tail End Charlie,” 54th Fighter Squadron, Amchitka, following a mission to Kiska and landing in dense fog, low on fuel.*

formance overall was superior, specifically at higher altitudes and with the use of appropriate tactics. P-38 squadrons were able to achieve impressive results downing more Japanese aircraft than pilots flying any other American warplane.

In the Aleutians, the 54th Fighter Squadron was among the first to receive the Lightning and was also the first unit to operationally employ them in combat. Initially, 25 P-38Es were put to the test in some of the most rugged environments in which to try this new, yet to be proven fighter. They quickly became the work horses of the fighter aircraft in the Aleutians. As a result, the Lightning pilots drew the most difficult missions of the campaign and also suffered the most drastic consequences. Half of the thirty original pilots in the 54th were dead within a year.

Service In the Aleutians

At the end of May 1942, the Alaskan bound P-38s received long range fuel tanks and become winterized at the Lockheed Factory at Burbank before arriving at Elmendorf Field. Their first operational mission was June 3, 1942, the day the Japanese first bombed Dutch Harbor. They conducted around the clock patrols over the Cook Inlet in search of any further enemy activity.

Following the Japanese invasion of Kiska days later, the Squadron was transferred to Cape Field, the airstrip at Fort Glenn on Umnak Island in

the Aleutians. August 4, 1942, the 54th FS was credited with the first to achieve a Lightning aerial victory against a Japanese aircraft when Lieutenants Kenneth Ambrose and Stan Long shot down two Japanese H6K4 Mavis flying boats while on a combat air patrol mission over two US seaplane tenders anchored in Nazan Bay at Atka Island.

The Alaskan squadron was also the first to employ the P-38 in long-range missions. On September 3, accompanied by B-24s the P-38s recorded their longest fighter mission of the war; Cape Field on Umnak to Kiska Harbor, 1234 miles round trip. The nerve-racking missions in marginal conditions took eight hours and used every last drop of fuel they had. With the closest emergency strip an additional 234 miles further east of their home base, one better hope for good weather. These types of sorties took a toll on them. By mid-September the pilots were exhausted and only half of them were still fit to fly. Luckily, the base on Adak was nearing completion, which allowed some of the P-40s and P-39s to begin missions over Kiska, in relief of the P-38s.

Beginning in 1943, the squadron added 24 newer G models to go with their remaining 10 P-38Es, as well as F-5As, the photo reconnaissance version of the P-38F. With these, the Lightning squadron operated out of Amchitka and once we reclaimed Attu, out of Alexai Point. They remained the only Lightning equipped unit until late in the war. Final-



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ly, in January 1945, the 343rd Fighter Group began to convert its P-40N equipped 11th, 18th and 344th Fighter Squadrons to the P-38L Lightning. They flew on fighter sweeps and escort sorties to the Kurile Islands up until V-J Day.

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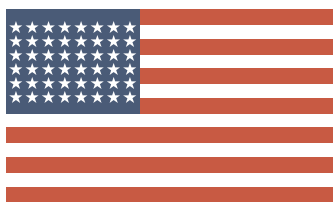
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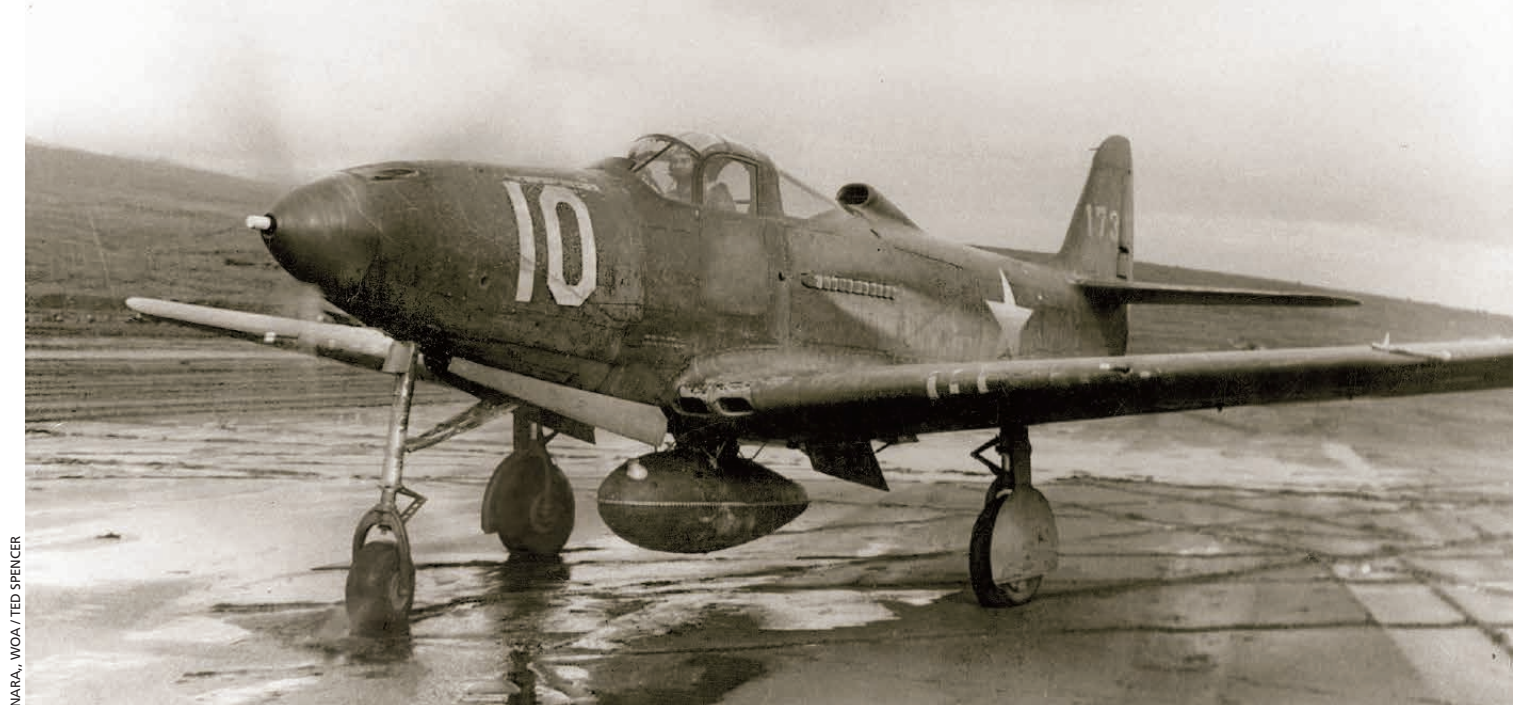
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Bell P-39 Airacobra



Model:	P-39E
Power:	One Allison V-1710-47 inline engine rated at 1200 hp
Top Speed:	376 mph
Cruise Speed:	250 mph
Range:	650-1500 miles
Ceiling:	32,000 feet
Bomb Load:	500 lbs of bombs on the undercarriage
Armament:	One 37 mm cannon firing through the propeller hub, two .50 caliber machine guns in the nose and two wing mounted.
Crew:	Pilot



NARA, WOA / TED SPENCER

The unique position of the engine behind the cockpit caused some pilot concern but proved to be no more of a hazard in a crash.

America's First Line Pursuit Plane

The Bell P-39 was one of America's front line pursuit planes at the onset of the war in the Pacific. This tricycle gear fighter was produced by Bell Aircraft to fill an Army Air Force need for a high-altitude interceptor that could get within firing distance but still remain out of the range of the bomber's guns. Designs began on the prototype XP-39 in 1937, but after testing, the supercharger was removed. This caused the P-39 to lose high altitude performance and fail to meet its intended interceptor role. The first production Airacobra made its initial flight in April 1939 at Wright Field, Ohio. By the time of the Pearl Harbor attack, nearly 600 had been built and were ready for service world-wide.

The unique configuration of the P-39 was built around its rather advanced 37mm T9 canon, which had to be mounted up front. This design forced the engine to be placed behind the cockpit. The propeller driveshaft then

ran from the engine, under the pilot's seat, between his legs and to the front of the plane. As you might imagine, this caused some pilot concern. In the end, it proved to be no more hazardous than a front mounted engine. However, recovery from a spin could be problematic if proper recovery techniques were not employed.

In the Pacific, it was generally outclassed by the Zero. Although it served well enough in the early months of the war, it is safe to say, it was not a favorite aircraft to fly for most British and American airmen. The Russians however, had great success with it. When P-39 production ended in August 1944, Bell had built 9,584 Airacobras, of which almost half, 4,773, had been allotted to the Soviet Union's Red Air Force via the lend lease agreement. The Alaskan-Siberian air road was the way in which the aircraft were delivered. The last stop in the US was Nome, Alaska before crossing the Bering Strait into Russia. For the Red

Air Force, it was more suited to the combat environment which involved low level ground attacks and the P-39 became the most successful of all lend-lease types sent to Russia and consequently played a big role in their road to victory.

Service in the Aleutians

The first three squadrons of P-39s assigned to defend the northern Pacific began their deployment in June 1942, after the bombing of Dutch Harbor. The 42nd, 56th and 57th squadrons of the 54 Fighter Group sent in a total of 38 P-39s accompanied by 312 support staff to Alaska to be stationed at three different strategic bases: Elmendorf Air Field in Anchorage, Fort Greely in Kodiak and Marks Air Field in Nome.

On September 12th, 1942, once the 807th Engineer Aviation Battalion completed the new forward airfield on Adak Island in the Aleutians, Colonel McCorkle was first to lead his flight of 14 P-39s from the 42nd Squadron down the steel matted runway, Marston matting. This new base on

Adak put the single engine fighters just within range of the Japanese-occupied island of Kiska some 250 miles away.

Their first combat took place just two days later. As part of the first major air attack on a North American target, they accompanied 12 B-24s, 1 B-17 photo-ship and 14 P-38s over Kiska Island, tasked with softening up the anti-aircraft defenses along the south side of the harbor. The P-39's 37-millimeter cannon, two .50- and four .30-caliber machine guns proved lethal against ground targets.

Even from Adak, the operating conditions in the Aleutians, extreme weather and long-range distances seriously pushed single engine fighters to the limit. Colonel McCorkle cautioned that the Airacobra be employed from Adak only under optimum weather conditions. As a result, despite its firepower, the P-39 served little time in the Aleutians. On October 9, 1942 the Airacobra pilots flew their last combat mission in the Aleutians.

In December 1942, the 54th Fighter Group departed Alaska for its home base at Harding Field, LA.

The group, with 44 pilots assigned, had provided air defense for mainland Alaska bases, and participated in nine missions against Kiska between 14 September and 9 October, flying 75 sorties. Forty-three sorties had been low-level strafing missions and the others flown as escort missions for the bombers.

Twenty decorations were awarded, including a Distinguished Flying Cross that went to Captain Arthur T. Rice for shooting down two "Rufes" and an A6M Zero. Including Captain Rice's victories, the 54th Fighter Group accounted for downing ten Japanese float aircraft during its stay in Alaska. The group lost one pilot killed in action, Major Wilber G. Miller, and another in an accident, Lt Robert J. Neal.

*In the cockpit of a Cobra
Trying hard to make the line
But at last my engine faltered,
Fare thee well, my 39
Oh the brass hats and the Congress
They have signed the dotted line.
They are lucky they just bought it,
They don't fly that 39.
Oh my darlin', oh my darlin'
Oh my darlin' Clementine
When I'm lost and gone forever
You can blame my 39*

- Poet unknown, sung to the tune of
"My Darling Clementine"

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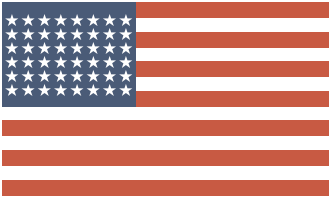
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Curtiss P-40 Warhawk



Model:	P-40K
Power:	One Allison V-1710-73 inline engine rated at 1325 hp
Top Speed:	371 mph
Cruise Speed:	205 mph
Range:	650-1250 miles
Ceiling:	30,000 feet
Bomb Load:	500 lbs of bombs on the undercarriage
Armament:	Six .50 caliber machine guns
Crew:	Pilot



COURTESY OF STEVE MILLS; WOA / TED SPENCER

First-line Fighter at the Onset of the War

The Curtiss P-40 was America's foremost fighter in service for the first half of the World War II. Developed by Curtiss design engineer Dr. Donovan R. Berlin in 1938 using the old airframe of its predecessor, the P-36. Berlin replaced the radial engine of the Hawk with a new liquid cooled supercharged Allison V-1710-19 engine. This new concept met the approval of the Army Air Corps leaders who then made the first and largest order of any warplane to date: 540 of them, ordered and delivered in June 1941.

It was the P-40s that rose up to engage Japanese aircraft during the attack on Pearl Harbor and the invasion of the Philippines in December 1941. It proved a successful fighter in the China-Burma-India Theater against Japanese Nakajima Ki-43 Hayabusa and replaced the RAF's Hurricanes in the Desert Air Force against the Luftwaffe BF 109s and later served in North Africa in 1943 with the first Army Air Force all-Black unit, the 99th Fighter Squadron, battling Folke-Wulf FW 190s.

The US Army Air Corps named it the P-40 Warhawk.

The British and Soviet air forces named it Tomahawk for the "B" and "C" models and Kittyhawk for "D" and later models. No matter what you called it, the P-40 ended up as the workhorse of the Allied aerial arsenal right through 1944. Although it may not have been as "hot" as later designs, it was a sound design that the Curtiss Factory was able to produce in large numbers. The P-40 was heavier, faster, and sturdier than Japanese fighters, and it out-dived and out-gunned them as well. The P-40 performed best at lower altitudes, below 15,000, it tolerated harsh climates and was easy to maintain in the field—perfect for theaters such as North Africa and the Aleutians. Overall, it was a durable and robust aircraft that saw combat in almost every theater, the most famous of which was in China where the American Volunteer Group, the "Flying Tigers" led by General Claire Chennault, fought against the Japanese before the US entry into the war.

Throughout its service, the P-40 would see many variations, all the way up to the "N" model, each one improved its fighting power just a little bit more. At the end of its brilliant career, more than 13,000 had been produced for

“The enemy’s next move is unknown, but whatever it is I am sure that each of you will meet it with the same firm resolution and unflinching devotion to duty which you have already displayed.”

– General Simon Bolivar Buckner Jr. to the 11th Fighter Squadron, June 1942.

service in the air forces of 28 nations. Of this total, 2,320 were of the “E” series.

Service in the Aleutians

January 3, 1942, the then First Lieutenant John S. Chennault, the eldest son of General Claire Chennault, led an air echelon from the 11th Fighter Squadron on a long and hazardous flight to Alaska in their newly winterized P-40Es from the Sacramento Air Depot. Eighteen of the 24 young pilots had less than 8 hours in the P-40, the remainder less than three. Chennault and his three flight commanders led the P-40s through some of the most raw and rugged terrain, and did so in the middle of winter. This was the first transition flight of its kind for a pursuit squadron stationed there. The entire arduous flight took them just over one month to complete. By the time they all arrived at Elmendorf Field in Anchorage, only 13 of the original 25 P-40s had made it. Seven crashed enroute, with the remainder stuck along the way in Canada.

By the end of May, the 11th Fighter Squadron had sent a detachment to the new advanced base at Otter Point on Umnak Island, roughly 80 miles west of Dutch Harbor/Unalaska. There they made up over half of the islands’ meager defenses which consisted of 12 P-40s, six B-26s, and one B-17. It was from this airfield that the P-40s engaged in their first enemy air to air combat.

On June 3, several hours after the first Japanese early morning raid on Dutch Harbor, two P-40Es

flying combat air patrol spotted two Nakajima E8N2 Dave two-seat reconnaissance float planes that were making their way towards Dutch Harbor. The P-40s immediately went after them, hitting one. It went down in the water while the other managed to escape, disappearing into the clouds. The next day, they caught the Japanese strike force again. This time, the force was much larger: nine B5-N Kate torpedo bombers, eleven D3-A Val dive-bombers and eleven A6M fighter aircraft. The adversaries were returning to their carrier after completing another air raid on Dutch Harbor when they were spotted. A dog fight ensued, with eight P-40s twisting their way around the Japanese planes, successfully downing two Vals, and scoring an aerial victory on one Zero. The latter was credited to Lt. John J. Cape, who also managed to cripple two other Kates so badly they did not make it back to the carrier. Unfortunately, Lt. Cape himself was fatally shot down just moments after his valiant efforts.

This encounter with the Zeros earned Chennault’s squadron the name “The Aleutian Tigers.” An emblem was quickly designed featuring the face of a Bengal tiger baring its shark teeth—perhaps a nod to Jack Chennault’s Fighting Tigers father.

In September, the P-40s saw their first action over Japanese occupied Kiska claiming two Rufes, Zeros on floats, who had come up to meet US forces as they were making a sweep over the Japanese main camp area. Ultimately, the Warhawks, like the Airacobras, were being pushed to its end range with



WOA / TED SPENCER

the 500-mile round trip foul weather missions to Kiska from Adak. Until a more advanced base on Amchitka was operational, just 70 miles east from the target, they ended up flying local air defense patrols until the end of January 1943.

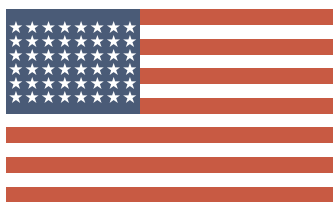
Once on Amchitka, the P-40s, now equipped with 500 lb bombs, were heavily involved in air to ground missions over Kiska, sometimes reaching over 30 sorties a day. Just two weeks after the US reclaimed Attu, Major Bob Brocklehurst led the first flight of six P-40s from the 344th Fighter Squadron onto the new airfield at Alexai Point, and later Shemya. They spent the rest of the war flying patrols in defense of US operations in the Kuriles Islands.

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Grumman F4F Wildcat



Model:	F4F-4
Power:	Pratt & Whitney R-1830-86 fourteen cylinder radial engine rated at 1200 hp
Top Speed:	335 mph
Cruise Speed:	155 mph
Range:	840-1275 miles
Ceiling:	40,000 ft
Bomb Load:	Two 100 lb bombs
Armament:	Six .50 caliber machine guns, three in each wing
Crew:	Pilot

UNITED STATES NAVY WOA / TED SPENCER



A rugged little fighter that could take a beating with good success against the Japanese A6M Zero early in the war.

The Stubby, Stubborn Naval Fighter

The F4F Wildcat is one of the first monoplanes to fly from US carrier decks. This single seat Grumman fighter was the primary weapon of the US Navy when the war began and became one of the most successful in the hands of experienced pilots. Almost surprisingly, Grumman's stubby, rugged little fighter held the line against the A6M Zeros in the early air battles over the Wake Islands and Guadalcanal destroying an average of seven enemy aircraft for every Wildcat lost. It was the most important weapon during the 1942 carrier battles of the Coral Sea, Midway, and the Eastern Solomons. In pure performance, the Japanese Zero outclassed the F4F, but with its tough as nails construction and impressive firepower the Wildcat prevailed.

In 1936, the US Navy published a requirement for a carrier-based fighter. While the Navy first selected the

Brewster F2A Buffalo, the very first US carrier-based monoplane, it also authorized Grumman to build one prototype, which eventually turned into the XF4F-3.

The Grumman designers planned the Wildcat for challenging take-offs and landings on small, heaving carrier decks. With large wings, situated well forward on the fuselage, the plane had very high lift, permitted quick take-offs, slow landings, and had excellent maneuverability. But high lift resulted in slower speed, which could only be improved with a more powerful engine. The "dash three" had a more powerful supercharged R-1 1830-76 Pratt & Whitney radial engine, larger wings, better machine gun installation, and (ultimately) a higher-mounted tailplane. With a top speed of 335 mph, it impressed the Navy, and 78 F4F-3 aircraft were ordered in August, 1939. France also ordered the F4F-3 but they capitulated before they could be de-

On May 14th, during the Battle of Attu, four Wildcat pilots went down, three fatally crashing and a fourth later rescued from the sea. Henderson Ridge on Attu was named after one of the fallen that day, USN Ensign Douglas Henderson, VC-21.

livered. Instead, they were sent to the British Royal Navy where they served with the British Fleet Air Arm called, the Martlet. On Christmas Day, 1940 two Martlets shot down a German Junkers Ju-88 near Scapa Flow, Scotland.

In 1942, an improved version of the F4F-4 was produced featuring a folding wing and two additional machine guns. These modifications decreased the performance of the aircraft but the added number of planes that could be stored on the carrier deck more than offset its deficiencies.

By the Battle of Midway in June 1942 all the carriers in the Pacific fleet were equipped with the Wildcat. Because of its small size and short field capabilities, it remained in service even after the introduction of the F6F Hellcat and F4U Corsair. By the end of the war, over 7,000 F4Fs were built.

Service in the Aleutians

The F4F-4 Wildcats in Alaska were one of the first responders when the campaign began and they were also one of the closers. Although they had a small role, it was an important one.

The Wildcat made its first appearance in Alaska within the first few days of June, 1942. Twelve F4F-4 Wildcats were rushed to Naval Air Station Kodiak to strengthen Alaska's air defenses. The naval fighters were part of the Pacific Fleet's VGS-9 Squadron, an escort scouting squadron temporarily assigned to VP-42. Although assigned with a carrier, the *USS*



NARA, COURTESY OF JEFF DICKRELL

Bogue, it was not yet commissioned therefore, the Wildcats operated as a land-based unit. They, along with the P-40s of the Army Air Force 18th Fighter Squadron, protected the main naval operating base on Kodiak, and the Army's Fort Greely in the interior of Alaska. In August, they were replaced by another Wildcat squadron AVG-12 which operated out of Dutch Harbor with as many as 12 F4F-4s. They did not stay long, though, and departed before the year was over.

Lieutenant Commander William Pennewill was in command of the Kodiak-based squadron but was killed June 23, 1942 when his F4F crashed while on duty at the Naval Air Station. He was posthumously awarded the Distinguished Flying Cross for "outstanding achievement in aerial flight in contact with the enemy, for leading his inexperienced squadron in a series of remarkable flights over

strange terrain and through most severe weather conditions, and for gallantly giving his life in the service of his country." In his honor, the US Navy launched the *USS Pennewill* (DE-175) on August 8, 1943 and it was commissioned on September 15th, 1943.

Another squadron of Wildcats returned to the Aleutians in May 1943 onboard the escort carrier *Nassau* (CVE-16), to provide air cover for the occupation of Attu. By the 11th of May fifteen were airborne as the ground forces were going ashore. This was the first close air support missions flown from an aircraft carrier of the campaign.

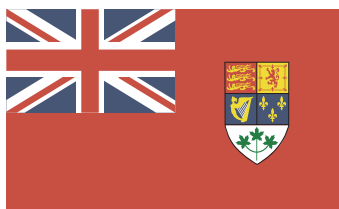
The weather once again proved perilous for air operations. Low level clouds and fog obscured targets, inexperienced pilots confusing enemy and allies and rocky seas, proved deadly for the rugged Wildcats. In the first five days of battle, the squadron lost at least 8 of their 26 F4F-4s and two of three F4F-4P, photo-ships.

The big waters of the Bering Sea and the wind and fog made carrier involvement less than ideal. Nine days after the battle had started, the *Nassau* and its Wildcats headed home leaving the ground forces to finish the job.

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Curtiss P-40E Kittyhawk



Model:	P-40E
Power:	One Allison V-1710-27/29 inline engine rated at 1150 hp
Top Speed:	362 mph
Cruise Speed:	205 mph
Range:	650-1250 miles
Ceiling:	29,000 feet
Bomb Load:	500 lbs of bombs on the undercarriage
Armament:	Six wing mounted 50 caliber machine guns
Crew:	Pilot

RCAF HISTORY AND HERITAGE OFFICE



Commonwealth Sister of the Warhawk

The Kittyhawk was the British name for the P-40 Warhawk. Four Royal Canadian Air Force fighter squadrons were equipped with Kittyhawks (P-40Es) and sent forward to aid in the defense of Alaska. Two, 115(F) and 118(F), were stationed in southeast Alaska, tasked with providing aerial defense of the US Naval base and shipping routes at Prince Rupert, a Canadian seaport used by the US forces to get much needed supplies to Alaska.

The other two were stationed in the Aleutians. The 111(F) Squadron came first, leaving its home base at Patricia Bay on Vancouver Island, now the Victoria Airport, and arriving in Anchorage on June 8, 1942. Flying its air echelon of 13 Kittyhawks 1800 miles, through what is

known as the inside route: Prince George, Fort Nelson, Watson Lake, Whitehorse, and Anchorage. Another five Kittyhawks, newly fitted with external fuel tanks, reached Alaska towards the end of June traveling the outside route: Annette Island, Yakutat and Anchorage. Their arrival would mark the first time in history that Canada and the US would join forces and serve under the operational control of one commander during wartime. 118(F) followed in the spring of 1943, replacing the Bolingbroke bombers from 8 (B) Squadron that had initially flown up with 111(F).

A month later, 111(F) advanced to Cape Field on Unalakleet and lost seven of their sixteen Kittyhawks on the trip. Five were weather related fatal crashes, one was due to a catastrophic electrical failure causing the pilot to bail out,

“Scared every time I get over Kiska because I don’t know whether I’m going to find a place to land when I get back.”

– F/O Arthur C. Fanning, 14(F) Squadron, RCAF

and the last was a landing accident at a fuel stop. Once on Umnak, the squadron utilized American P-40s to carry out their patrols due to the sudden lack of availability of Canadian aircraft. In August they received brand new P-40Ks, initially intended for the American squadrons but quietly redirected to the Canadians. As their squadron diary notes the pilots “found them quite satisfactory.”

The Canadian airmen saw their first offensive action in September 1942, with four of their pilots selected to participate in the first P-40 mission over Japanese occupied Kiska Island. A combined group

of 20 P-40s from the US Army Air Force 18th, 11th and the Canadian 111 Fighter Squadrons escorted eleven B-24s over enemy territory. As they approached Kiska Harbor, two enemy Rufes, A6M Zeros on floats, came up to meet the fighters. Air combat ensued resulting in one Rufe being shot down by Canadian Squadron Leader Kenneth Boomer and another by the American squadron leader Major Jack Chennault.

In mid-February, 1943, at the request of US General Buckner, 15 additional Kittyhawks from 14(F) Squadron made the difficult trip north. Led

by another Battle of Britain veteran S/L Brad Walker, the airmen left Sea Island, now the Vancouver Airport, and slogged their way through the throes of Alaska’s winter weather. The grueling 2,500 mile journey to Fort Glenn on Umnak took them an entire month. They arrived on March 15th without losing a single aircraft. By the end of April, they had merged seamlessly with the US 11th fighter squadrons on Amchitka forming its “B” Flight and completing their second mission which consisted of an all-Canadian P-40 escort of US B-24s over Kiska.

Both 14 and 111 Fighter Squadrons rotated in and out of Amchitka flying joint offensive missions with the US Squadrons until the beginning of September when General Buckner gave them their final order to stand down. In total, 14(F) Squadron flew 30 missions and 190 sorties with 111(F) accumulating similar numbers. They received twelve American Air Medals and two mentions in dispatches. Eight Canadian airmen lost their lives while serving in the Aleutian Campaign. The airmen are buried in Fort Richardson National Cemetery.

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RCAF HISTORY AND HERITAGE OFFICE



15TH TOW TARGET
SQUADRON
ORDERLY ROOM

The Allied Utility Aircraft

Often Under Recognized But Vitally Important

Most of the glory and glamor given to pilots often goes to those who flew fighter and bomber aircraft. Quite frankly, triumph in battle takes the proficiency and competence of the support aircraft as well. Utility planes served a variety of purposes though out the Aleutian Campaign and those pilots also faced that same relentless unseen enemy: the weather.

Some of the support aircraft who participated in the overall success of the theater were transports carrying troops and equipment to far flung bases in the Aleutians. Others, such as the PBY Catalina flying boat, were designed for long range maritime patrols. Some, like the OS2U Kingfisher, were tasked with scout/observation duties. Photo reconnaissance planes, often retrofitted combat planes, flew over enemy areas collecting images to be used in strategizing the next course of action.

Transports and photo reconnaissance aircraft were generally unarmed. Transports flew through combat zones but probably suffered the least from anti-aircraft fire and harassment from Japanese fighters. Photo reconnaissance aircraft often flew over battle zones to assess damage and were therefore potentially subject to enemy fire over their target.

Without these types of support aircraft, victory, especially with the geographic vastness of a war in Alaska, would not have been possible.

Left: Shemya, 1945.

673D AIR BASE WING HISTORY OFFICE, EMANUAL KLINE COLLECTION

Lockheed F-5A Photo Lightning

Grumman J2-F Duck

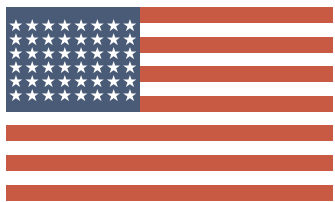
Vought OS2-U Kingfisher

Consolidated PBY-5A Catalina

Douglas C-47 Skytrain

C-53 Skyrooper

Lockheed F-5A Photo Lightning



Model:	F5-A
Power:	Two Allison V-1710-51/55 inline engines rated at 1325 hp each
Top Speed:	414 mph
Cruise Speed:	275 mph
Range:	1300 miles
Ceiling:	44,000 feet
Armament:	Unarmed. Five cameras weighing 500 lbs replaced the 900 lbs of guns and ammunition of the P-38G model
Crew:	Pilot

673D AIR BASE WING HISTORY OFFICE



The F-5 was the “eyes” of the army. The Lightning was armed with five powerful cameras in the nose.

The Eyes of the Army

Photo reconnaissance aircraft were the eyes of the Army. They were used to gain insight as to the positions and movements of the opponent, for battlefield surveillance both pre and post mission, and for airspace surveillance, investigation and observation. Aerial reconnaissance has been around since well before the American Civil War, when balloons spied on enemy activities and defenses.

World War I reinvented aerial reconnaissance with the use of airplanes, and together with the use of cameras, added an entirely new dimension and accuracy of intelligence gathered for the cartographers of the day. By the start of World War II, the concept of high altitude fast traveling scouting missions was adopted. Allied forces

recognized the need for an aircraft that could successfully penetrate deep behind enemy lines and obtain valuable information, and do so safely without detection. Accurate enemy intelligence was vital to having an advantage over the adversary. It aided the commanders in devising effective battle plans potentially saving the lives of his men. As a result, it played one of the most important roles of the war.

Initially, Americans considered the B-17 and B-24 to fill this need, but they were very big, too slow, and were easy prey when alone. This led to the only reasonable choice at that point in time, the versatile P-38 Lightning; it operated with high ceilings, it was fast and maneuverable. The photo conversion from a fighter to a high-flying

Unescorted, Unarmed and Unafraid were the pilots of the F-5 Photo Lightning, also affectionally called “Photo Joes.”

reconnaissance aircraft involved replacing the nose mounted guns with a clear view panel and up to six cameras capable of capturing both vertical and oblique photos; each wrapped in an electric blanket to protect it from low temperatures at high altitudes and latitudes.

The first photo version of the Lightning was given the name Lockheed F-4 Photo Lightning or “Photo Joe” modified from the P-38E and was put into active service in Australia, August 1942. The F-5A (P-38G) came along months later using the P-38G for its conversion and this was the model used in the Aleutians. Overall, Lockheed built over 1,400 reconnaissance aircraft from many production model P-38s.

Service in the Aleutians

The first F-5A Photo Reconnaissance Lightning aircraft stationed in the Aleutians were part of the 54th Fighter Squadron and were employed sometime in February 1943 to provide damage assessment photographs of the raids on Kiska as well as for intelligence and battle planning on Attu. The 54th Squadron were equipped with 3-F-5As.

The earliest Allied planes to fly reconnaissance over the territory of Alaska were from the First Photographic Squadron equipped with Beechcraft F-2 photo-reconnaissance aircraft. Arriving in May of 1941, they spent seven months scouting out the territory for potential base sites and helped map the

route for the Alaska Highway.

The United States Navy VF-21 was further equipped with 3 F4F Wildcat Photo Reconnaissance planes from Marine squadron VMO-15 and were used during US landings on Attu. Additionally, a few of the B-17Es from the 36th Bombardment Squadron were used during sorties to capture the effectiveness of bombing missions.

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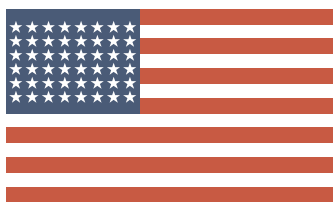
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Bombs away over Kiska as a photographer records the results.

Grumman J2-F Duck



Model:	J2-F
Power:	One Wright 1820-54 nine cylinder radial engine rated at 1050 hp
Top Speed:	190 mph
Cruise Speed:	150 mph
Range:	780 miles
Ceiling:	25,750 ft
Bomb Load:	650 lbs of bombs and/or depth charges
Armament:	One .30 caliber Browning Machine Gun
Crew:	2 – Pilot and observer



NARA, WOA / TED SPENCER

The Duck defined the term “utility aircraft” - it transported, was used in photo reconnaissance and rescued downed fliers.

There is No Job Too Tough for this Airplane

The Grumman JF/J2F Duck is a small utility seaplane with a center float, wing floats and retractable landing gear. It was derived from the XJF-1, a Grumman amphibian that flew for the first time in May 1933. Later, Grumman built a variety of JF- and J2F- series aircraft. They were used primarily by the Navy, Marine Corps, and Coast Guard for photography, target-towing, scouting and rescue work.

In 1937 the first of 544 Grumman J2F “Ducks” were delivered to the Navy. The Duck was one of those military workhorses moving around in the background before and

during World War II which did a tremendous job but never got the publicity of its’ more glamorous teammates. Some said the Duck could be more aptly named the “Ugly Duckling” because of its unique appearance. Be that as it may, when no other bomber could be found, it carried bombs; when no other transport could be found, it transported; when no other photo plane could be found, it photographed and when no other rescuer could be found, it rescued. The JF/J2F defined the term “Utility Craft.”

In the Pacific, a J2F on a photo reconnaissance mission was credited with damaging two Japanese “Zero” fighters and rescued many downed pilots at sea.

Service in the Aleutians

The buildup of military forces in Alaska was off to a slow start. Captain Ralph Parker, General Bolivar Buckner's equal, in charge of the newly assigned US Navy Alaska Sector, 13th Naval District, was responsible for overseeing the buildup in the Navy in the Alaska. Like Buckner, he was trying desperately to get Navy aircraft up to Alaska with little success. The Navy planes that were available to him in 1941 were a Curtiss SOC-1 Seagull scout plane aboard *USS Charleston*, his headquarters, a Vought OS2U-3 Kingfisher located in southeast Alaska and Grumman J2F-6 Duck situated at the Naval Air Station Kodiak. Besides the Kingfisher, although armed, these aircraft were only suitable for offshore patrolling and light utility duties which we can assume, was what they were used for ultimately.

Little else is known about the Duck's role in the Aleutians. However, the article written for the October 1944 issue of Coast Guard Magazine speaks of its versatile role in the war:

The versatile J2F-6, manufactured by Columbia Aircraft Corp., has become to the Coast Guard what the jeep is to the Army. Fliers say there is no job too tough for it from the Aleutians to the [South Pacific] atolls.

"They must be using her to scare the Japanese," Columbia aircraft workers who make the J2F-6 used to crack. Until a month ago the builders of this ugly duckling amphibian, whose motor roar is amplified frighteningly by echoing against the hollow pontoon, didn't know what they were making her for. They simply knew that Navy and Coast Guard pilots flew the noisy Ducks away from the Long Island plant's apron as fast as they could be put there.

Early last month a telegram of congratulations from the Bureau of Aeronautics conferred glamour on the

short-winged, long snouted Duck for the first time. Because she can go where other planes can't, takeoff amid ten-foot wave or from a carrier deck, sit down in a narrow lagoon, channel or creek and doesn't nose over in the water, the Duck has become the "rescuing angel" to many a wreck pilot in the Pacific.

Powered by a Wright improved "Cyclone," the biplane can stay aloft for seven or eight hours. When she goes on a rescue or photographic mission, the Duck takes off five or ten minutes in advance of a fighter escort to equalize the speed variability.

She carries a crew of three but has carried as many as seven. She has a very shallow draft and can land in a few feet of water. She was in use in Alaska and on every front in the Pacific.

The Bureau of Aeronautics' telegram chronicled one of the Pacific exploits—In seas so high a heavy patrol plane had to turn down the assignment, Maj.

Ronald Campbell, took off in a Duck. "With waves breaking over his top wing," the telegram said, "Maj. Campbell landed, picked up the pilot, and taxied nine miles to the lee of an island where in calmer waters he could take off. The rescue plane was badly warped and sprung by the buffeting, but landed with rescuer and rescued intact.

In 1948, the US Air Force acquired eight surplus Navy J2F-6s for air-sea rescue work. Five were designated OA-12s and sent to Alaska for duty with the 10th Air Rescue squadron. One of the aircraft was salvaged from Chelatna Lake and resides at the Alaska Aviation Heritage Museum in Anchorage.

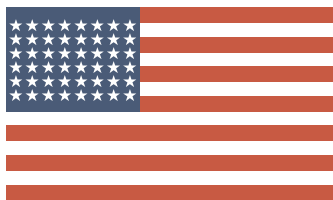
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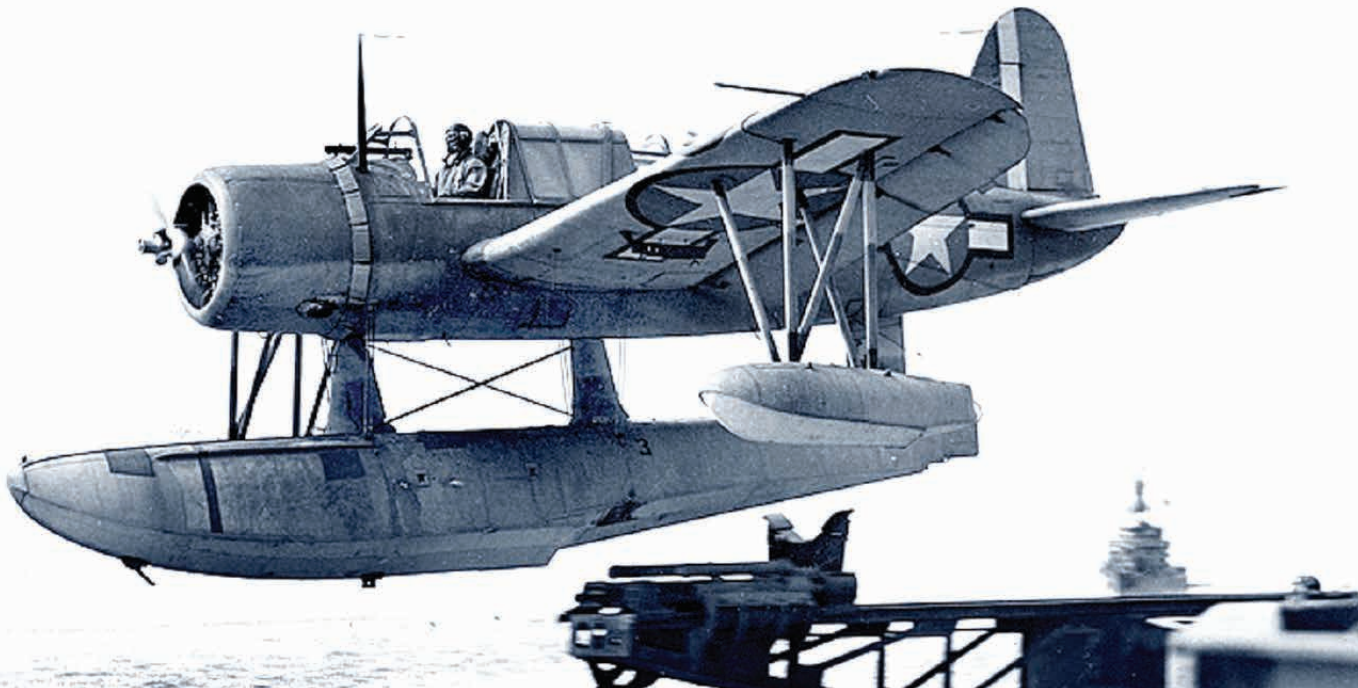
UNITED STATES NAVY, WOA / TED SPENCER

Vought OS2-U Kingfisher



Model:	OS2-U1
Power:	Pratt & Whitney R-985-48 nine cylinder radial engine rated at 450 hp
Top Speed:	160 mph
Cruise Speed:	116 mph
Range:	805 miles
Ceiling:	16,500 ft
Armament:	Two. One .30 caliber machine gun forward, and one free-swinging machine gun in the rear
Crew:	2 - Pilot and radio operator/gunner

UNITED STATES NAVY; WOA / TED SPENCER



The Kingfisher had a reputation for reliability, despite its modest performance. It served as a utility aircraft operating mostly off seaplane tenders but also from land bases.

Vought's Unique Design Wins the Contract

In 1937, the Navy issued a new specification for an "Observation-Scout" aircraft to operate from the fleet's battleships. Vought-Sikorsky won the contract and Vought engineer Rex B. Bisel set out to design a primarily carrier-based observation plane that took a radical departure from its competitors; a two-seat monoplane, monofloat design featuring a smooth, seamless metal fuselage and innovative wing components such as deflector plate flaps and drooping ailerons along the trailing edge of the wing to increase its lift capabilities. Vought delivered 54 of its new aircraft, designated OS2-U-1, by November 1940. The Kingfisher crew quickly gained a reputation for reliability, despite the modest performance by its low powered engine. Several other models were later produced and, in total, over 1,500 OS2Us were built.

The Kingfisher was mainly a ship-based observation seaplane used by the US Navy during World War II. It took off using a catapult powered by a cannon, and returned to the ship by landing on the water, taxiing over to the side of the vessel then it was hoisted back onboard via a crane. At the time of Pearl Harbor, all the Navy's battleships were equipped with the OS2-U. Additionally, the carriers Saratoga, Wasp, and Hornet and the seaplane tenders Albemarle, Barnegat, Biscayne, Casco (stationed in the Aleutians), Curtiss, Heron, Humboldt, Pocomoke, Tangier, and Wright, also used it for utility work.

The Kingfishers saw action in all theaters but primarily in the Pacific where Kingfisher pilots saved the lives of many a downed airmen with air to sea rescue. Spotting roles gave way to ship's radars, so the battleship-based planes were used for general and tactical and utility missions, air-sea rescue, anti-submarine patrol and training.

At the time of the attack on Pearl Harbor, the defense of southeast Alaska consisted of one Kingfisher, one Grumman Goose and four commercial aircraft from Ellis Air Transport. Using privately owned aircraft in defense of an area was not exactly the conventional way of doing things, but this was Alaska where unconventional methods were a must.

Shore based squadrons operated mainly in the later role throughout the war, except in Alaska. The later land-based variants were tasked with bombing missions, target tug duties, as well as to chase down practice torpedoes. Stateside, the Coast Guard was also allocated 53 OS2-U for convoy escort and anti-submarine patrols.

As part of the Lend-Lease agreement, the Kingfisher was also sent to Britain where they served with the Royal Navy.

Service in the Aleutians

LCDR Robert E Ellis, USNR, a legendary Alaskan bush pilot, commanded one of the first squadrons of Kingfishers in Alaska, VS-70, which arrived at Naval Air Station Sitka in June 1942. Prior to that and at the time of Pearl Harbor, Naval Air Station Sitka had only one Kingfisher and one Grumman Goose to patrol the surrounding waters in defense of Alaska. Ellis logged hundreds of hours in the OS2 flying patrols from the middle of winter until June of 1942 when the full complement of Kingfishers arrived.

Four other Navy VS squadrons, 48, 49 and 56 with a combined strength of 42 land and sea-based Kingfishers, eventually operated out of Alaska and complemented Fleet Air Wing Four's fleet of PBYS. They were mainly used to fly anti-submarine patrol but when needed, could spot naval gunfire, and

provide close air support for the ground forces. They were equipped with 325 depth charges. During the Battle of Attu, the Kingfisher would play a critical role; several days into the fighting, Colonel Eareckson favored the reliable Kingfisher as the more suitable aircraft over the F4F Wildcat, who had lost almost half their aircraft in the first nine days of the operation. In the end, it was the Kingfishers that provided the ground forces protection they needed to get the job done.

To accommodate the modified land-based Kingfishers, the short fields at Sitka, Kodiak and Dutch Harbor had special "land carrier" runways built complete with a catapult and arresting cables. The catapult worked perfectly. The arresting cables, on

the other hand, were found to be too taut causing many a pilot a trip to the medic. The cables were short-lived.

Both the OS2U-1 and the OS2N-3, the third version of the Kingfisher made, were present during the Aleutian campaign spanning nearly the entire state including: Sitka, Yakutat, Kodiak, Sand Point, Dutch Harbor, Umnak, Adak, Atka, Amchitka and Attu. All but one squadron stayed until the beginning of 1945 and one, now outfitted with Dauntless dive-bombers, stayed until the end of the war.

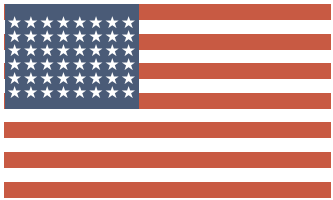
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ROBERT A SMITH COLLECTION, COURTESY OF KAREN ABEL

Consolidated PBY-5A Catalina



Model:	PBY-5A
Power:	Two Pratt & Whitney R-1830-92 fourteen cylinder radial engines rated at 1200 hp each
Top Speed:	179 mph
Cruise Speed:	120 mph
Range:	2545 miles
Ceiling:	20,000 ft
Bomb Load:	8000 lbs
Armament:	Two .50 caliber machine guns in the waist and two .30 caliber machine guns in the bow and rear tunnel
Crew:	7 to 9 - Pilot, co-pilot, radioman, navigator, flight mechanic and four gunners (bow turret, 2 waist gunners, ventral gunner)



WMA / TED SPENCER

The PBY Catalina was one of the most successful and famous flying boats ever in service.

The Slowest Combat Aircraft of the War

The Consolidated PBY-5 Catalina was one of, if not the most, highly recognized and successful flying boats ever in service. The Cat is a twin-engine, parasol-mounted monoplane equipped with a flying boat hull, retractable tricycle landing gear and its retractable wing-tip floats gave it an unforgettable distinctive look. It made its first official appearance as a Navy Patrol Bomber in 1937.

The Catalina was light-heartedly described as the slowest combat aircraft of the war and because it was not made for air battle, it was seriously underarmed. If engaged, a pilot and crew could do little to defend themselves. The Catalina was tough though and its rugged and sturdy construction allowed it to withstand the damage inflicted during an attack. In the end, the PBY had other assets to make up for its shortcomings and as a marine patrol plane,

its range was the more important.

The PBY series seaplanes and amphibians were flown extensively by the Navy during World War II. The Army Air Force also used the aircraft, designated the OA-10, primarily for air-sea rescue work, also known as “Dumbo” missions, in Emergency Rescue Squadrons throughout the war and for several years thereafter. During the conflict, OA-10 crews rescued hundreds of downed fliers. The night operations version of the PBY, painted all black and called the Black Cats, successfully hit a Japanese tanker that was part of the Guadalcanal invasion fleet. And it was also the Catalina that first located the advancing Japanese forces during the decisive Battle of Midway.

From discovering enemy locations and stealthy night raids to anti-submarine patrols, dive bombing land targets, and rescuing down pilots in the sea, the Catalina

“Every flight was a flight that the crew should not have returned from. Every man knew this and yet none wavered.”

– Captain Leslie E. Gehres, Commander of Fleet Air Wing 4

established a remarkable reputation during WWII. In the Aleutians, their service was immeasurable. The long-range parameters of the theater combined with the abominable flying conditions, made the PBY an invaluable air asset in the war in Alaska.

Consolidated and its licensees made over 3000 Catalinas by the time the war was over.

Service in the Aleutians

Catalinas flew over every area of the Pacific in range of air patrols. Their task was primarily to observe, not to attack, although in Alaska this was not always the case. The Navy PBYs began arriving towards the end of 1941 and initially operated out of Sitka, Kodiak and Dutch Harbor, later expanding to Umnak, Adak, Amchitka, and Attu. At the time of the Japanese attack on Dutch Harbor, PBYs made up a large portion of the air strength in the Aleutians.

The PBYs from Patrol Wing Four were assigned the job of detecting Japanese movements in the Aleutian Island area then notifying the Eleventh Air Force so they could subsequently conduct bombing missions. They were also responsible for protecting Allied shipping and search and rescue.

The Cat provided an advantage that the land base bombers lacked due to terrain, limited facilities and weather. The Catalina, supported by tenders, could operate over longer distances and had the versatility to land and take off from both water and land

surfaces, an important advantage when runways are regularly socked in along the chain. Radar capabilities and its slow flight characteristics made the PBY ideally suited for search operations in the Aleutians. Radar gave it the capability of flying in bad weather and its slow speed allowed it to maneuver away from dangerous situations and permitted approaches to land that would have been impossible for faster land-based aircraft.

The Catalina played a crucial role in the defense of Dutch Harbor. The Cats were challenged with the job of locating the Japanese fleet and alerting the base before they could attack. To that end, the PBY crews of Patrol Wing Four had flown long searches without letup from Cold Bay and Dutch Harbor. With too few crews to go around they had little time to rest. Their PBYs were refueled on landing, often at satellite fuel sites, and launched again before the engines had time to cool. It was not uncommon for the same crew to remain aboard their aircraft for two to three days without returning to base. Often flyers returned to base with the planes riddled by hundreds of bullet holes.

In October 1942 an anti-aircraft round hit the left engine of the P-38E flown by Lt Luther B. Stockard, 54th Fighter Squadron. The engine burst into flames, which quickly began spreading. The crew of a B-24 overhead saw Stockard go down and dropped a life raft. Lieutenant Stockard, overcome by the cold, could not reach it. A PBY

was summoned, but arrived too late. Following the incident Fleet Air Wing 4 positioned a PBY closer to combat areas and the Eleventh Air Force acquired several OA-10s (the Army version of the PBY) for search and rescue work thus improving their response time. These aircraft later assisted the 10th Emergency Rescue Boat Squadron based in Cold Bay.

The lumbering patrol bombers flew in the Aleutians throughout the war. Once the Japanese were expelled from the islands, focus shifted to the Kuril Islands where the PBY flew photoreconnaissance missions. But by February 1944, PBYs were removed from these missions and returned to duty in sector patrol. The aircraft had proven unsuitable for night operations against the northern Kurils and were replaced by the faster, more agile and better armed PV-1s.

Several squadrons were equipped with the PBY in the Aleutians: VP-41, VP-42, VP-43, VP-45, VP-51, VP-61, and VP-62.

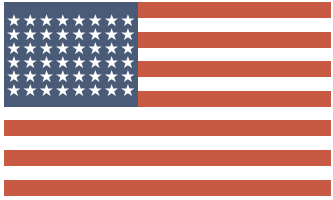
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Douglas C-47 Skytrain



Model:	C-47
Power:	Two 1,200-hp Pratt & Whitney R-1830-92 fourteen cylinders radial engines rated at 1200 hp each
Top Speed:	230 mph
Cruise Speed:	207 mph
Range:	2125 miles
Ceiling:	23,200 ft
Cargo Load:	Up to 6,000 lbs or 28 troops
Armament:	None
Crew:	3 - pilot, co-pilot, radio operator



"The C-47 was one of the four machines that won World War II". General Dwight D. Eisenhower

A Civilian Airliner Adopted to Military Service

The Douglas Commercial DC-3 airliner revolutionized commercial aviation with the introduction of practical and profitable air travel beginning with its arrival in the mid 1930's. It achieved another major distinction in military service as the civil forefather of the C-47 transport. General Dwight Eisenhower described the C-47 as one of the four machines that won World War II, along with the bazooka, jeep, and the atomic bomb.

By 1941, the DC-3 had proven itself as a major air asset and the Army Air Forces choose the civilian airliner to become its standard transport aircraft. After a number of military modifications including more powerful engines, the removal of airline seating in favor of utility seats along the walls, a stronger rear fuselage and floor, and the addition of large loading doors, it was ready to enter service

with the designation C-47 Skytrain or as pilots liked to call it, the Gooney Bird.

The Skytrain was a good handling airplane and had an optimal weight to cargo ratio. It was highly reliable and could operate from short landing strips. The C-47 wore many hats throughout its service; a troop transport that could carry 28 combat ready soldiers, a medical airlift plane that held 14 stretcher patients and three nurses, and as a cargo plane, the C-47 could carry up to 6,000 lbs.

The C-47 was produced in greater numbers than any other Army transport. It operated in every continent of the world and participated in every major battle. The US Navy and Marine Corps used the aircraft, as R4D, as did the British and Australians designating it Dakota, short for Douglas Aircraft Company Transport Aircraft. At the end of the war, more than 10,000 of these aircraft, of all types and designations, had been built, 455 as commercial

After the war, legendary Alaskan pilot Bob Reeve bought several of the Alaskan-based C-47s and began Reeve Airways. For years, it provided the only air passenger service in the Aleutian islands. Bob was also one of the few civilian flyers contracted to fly for the military and cleared to fly into the combat zones.

airlines and 10,174 as military aircraft.

In fact, its design was so successful that many C-47 aircraft remained in US service through the Korean and Vietnam wars. Many were also sold after World War II and put into civilian service as airliners and cargo aircraft, some of which are still in regular service today, particularly in Alaska and the Canadian Arctic.

Service in the Aleutians

Two squadrons constituted the military airlift for the Eleventh Air Force. Assigned to XI Service Carrier Squadron, they operated from Elmendorf Field, supporting the bases in the Aleutians as the allies advanced down the chain. Initially, only the 42nd Troop Carrier Squadron, which arrived in Alaska May 2, 1942, operated with a combined 13 C-47s and C-53s. After the attack on Dutch Harbor, the average pilot was logging 200 hours a month. By November, the 54th Troop Carrier squadron arrived with 13 more C-47s providing some welcome relief. The transports were used to move vital cargo, mail and passengers typically on a regular schedule. They also transported troops between bases and sometimes acted as escorts to fighter formations when moving between locations.

With its many roles, the C-47 flew constantly. Trips regularly consisted of long hours and very often under hazardous conditions, landing at rudimentary airstrips without facilities. It was a difficult



COURTESY OF LARRY HUGGETT, WOA / TED SPENCER

and demanding job. Their contributions have never been fully recognized.

The first operational loss of a C-47 with the 54th Squadron occurred during its first month of operation in Alaska. Colonel Everett S. Davis, the first Commander of the Eleventh Air Force, and seven others disappeared after taking off from Naknek on a flight to Elmendorf Field. The weather at the time required instrument flying with severe winds up to 70 miles per hour reported. A one-month search was launched for the missing transport when it failed to arrive at its destination. The search was resumed in August 1943 when the snow had cleared from the tops of all but the tallest mountains. The searchers

found the wreckage later that month at the 2,000-foot level on the south shore of Lake Iliamna. It had apparently struck at full power with everyone aboard killed instantly. Colonel Davis was buried with full military honors in the Fort Richardson cemetery and the airfield on Adak was named in his honor, Davis Army Airfield.

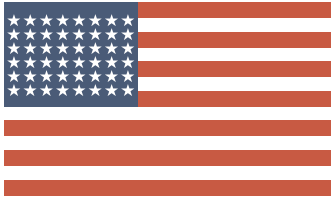
The C-47 was used in the Aleutians from 1942-49.

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Douglas C-53 Skytrooper



Model:	C-53A
Power:	Two Pratt and Whitney R-1830-92 cylinders radial engines rated at 1200 hp each
Cruise Speed:	230 mph
Range:	1350 miles
Ceiling:	23,950 ft
Cargo Load:	27 seats or 12,200 lbs
Armament:	None
Crew:	3-4 - pilot, co-pilot, radio operator, navigator

ALASKA MILITARY HISTORY ASSOCIATION COLLECTION



The C-53, a variant of a DC-3, was created specifically to transport paratroopers, hence its name "Skytrooper." It was a troop transport that participated in missions as a drop platform for paratroopers, glider tugs and medical evacuation.

The Troop Transport Made for the Arctic

Like the C-47 Skytrain, the C-53 was essentially a Douglas DC-3 configured by the US Army Air Corps to specifically transport paratroopers to the battle front, thus the Skytrooper moniker. As a troop transport, the C-53 was fitted with fixed bench style seating that faced the middle of the aircraft, enough to carry 28 fully loaded soldiers. Instead of the large cargo door, it was equipped with a port side passenger door.

Of course, the most well-known use of the Skytrooper was on D-Day when nearly 1000 allied C-53s/C-47s flew into France dropping more than 13,000 paratroopers and hours later, towing 500 gliders over the beaches of Normandy. This unprecedented act would lead to the eventual end of a long exhaustive battle in Europe.

In the Arctic, the C-53A was modified with hot air de-icers replacing pneumatic boots. The C-53B was a winterized version converted for arctic operations. In addition to winterized equipment, it was equipped with extra fuel capacity and had a separate navigator's station. Only 8 of these were built. This model was probably used in Alaska and purportedly the aircraft used in 1942 by the 42nd troop carrier squadron.

Of the 10,000-plus DC-3 variants that were produced, just over 400 were configured as the C-53 Skytrooper.

Service in the Aleutians

In May 1942 the Eleventh Air Force activated the 42nd Transport Squadron under the command of Capt. Phillip T. Durfee. The squadron, the first flying unit to be

C-53 crews accumulated a staggering number of flight hours averaging 1,200 per man during the Aleutian tour. One aircraft logged 187 flight hours over a 17-day period.

activated in Alaska, was equipped with five brand new C-53s that had deployed to Alaska to provide support for the 11th Fighter Squadron and 77th Bombardment Squadron of the 28th Composite Group. They were joined in November by the 54th Troop Carrier Squadron from Florence, SC and were assigned to the XI Service Command.

Prior to the two Squadrons' arrival, the Eleventh Air Force had depended on local commercial airlift and its assigned B-18s and one B-10 to move cargo and personnel. The two squadrons provided airlift support in the Aleutian Islands, flying pioneer missions before air bases had been completed. The crews flew under austere conditions, accumulating staggering hours with an average of 1,200 per man during their Aleutian tour. Typical of most trans-

port pilots, Claron U. Pratt of the 42nd Transport Squadron flew 153 hours during the month of June 1943—an average of more than 5 hours per day—without mishap. One aircraft accumulated 187 hours of flying in a 17-day period.

The 42nd Transport Squadron was particularly busy flying troops and equipment to forward bases in the Aleutians. It quickly became evident that the 600-mile trips from Cold Bay to distant fog-shrouded islands and returning was a particularly hazardous and grueling challenge, even for the most experienced pilot. Despite the hazards the transport pilots flew in the worst weather with a record of dependability. Claron U. Pratt was already an experienced United Airline pilot when he was called to duty in the 42nd Transport Squadron.

He describes flying conditions he encountered in Alaska:

The route from Anchorage down the chain of islands had to be flown by visual flight rules since there were no let-down facilities. If visibility dropped down, so did the pilots, until just a few feet of the water. The single engine boys were on their own with no one but themselves to navigate. Those of us in cargo planes would sometimes hold a map on our laps and the one not flying would count the little islets as we would fly by and, having passed the mainland or island, would count the minutes that could safely be flown before contact with the next island.



673D AIR BASE WING HISTORY OFFICE

If land was not sighted in that time, a sharp pull-up would be made with an instrument flight back to a station with an instrument letdown facility.

Another problem was often encountered called the "williwaw," strong winds that were unpredictable, reaching speeds of up to 100 mph even at lower levels. On one occasion, after take-off from Umnak for a return flight to Anchorage, my copilot was flying close to the water because of rain and low visibility. There were no small islands off to our right and a peninsula with two volcanos rising to 9,000 feet to our left. As the weather was deteriorating, I suggested that if we had to go below fifty feet we should pull up immediately. Before long we were down to about that altitude, and we started our steep climb up into the murk. At 2,000 feet I felt that our drift to the left was greater than expected and gave the command to make a 10 degree correction to the right—NOW—and increase the rate of climb. We started to break out of the overcast at 3,500 feet and as we did so, a snow-covered ridge was about fifty feet off our left wingtip. Strangely, neither of us said a word, just looked at each other. Not until we reached Anchorage did the seriousness of the situation really strike us.

- Claron U. Pratt, quoted in Blake W. Smith, *Warplanes to Alaska*, 1998

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Aircraft of Imperial Japan

In the 1930s and into the beginning of World War II, Japan had some of the most advanced warplanes that graced the skies. Since the beginning of the twentieth century, under the direction of Admiral Yamamoto, Japanese airplane manufacturers Mitsubishi, Nakajima and Kawasaki were importing and studying planes from Allied nations while quietly engineering their own arsenal. What they created, at least for a short while, took the world by surprise.

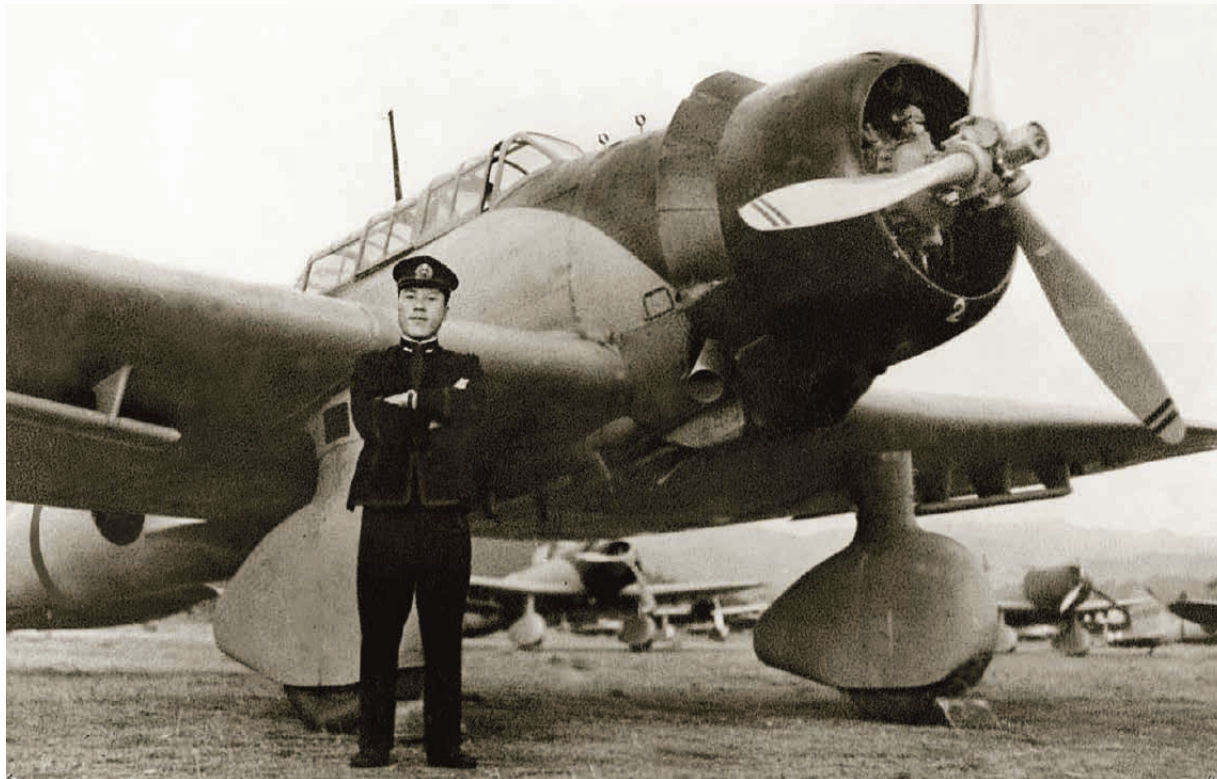
In 1937, Japan launched the first long range bomber, the Mitsubishi G3M Type 96 Attack

Bomber, which the Allies named “Nells.” It had the capability to fly more than 1,200 miles per mission, longer than any other aircraft at the time. They soon followed that feat with the introduction of the Mitsubishi A5M4, Type 96 carrier fighter, the “Claude,” the first operational low-wing monoplane. The Claude was the prelude to the A6M Zero which controlled the skies over the Pacific by the time WWII was declared.

Although the Imperial Japanese fleet were seemingly unstoppable, the aircraft were built with some

serious design flaws that traded a pilot's defenses for offensive capabilities. By and large, their aircraft at the time were designed from their experiences of the war in China for attack against a weaker less guarded foe. Consequently, they were built with few defensive features. This problem plagued Japanese pilots throughout World War II. Their aircraft provided little protection from enemy fire and lack of self-sealing fuel tanks turned many an airplane into a fireball.

Although Japan started the second world war with a cadre of experienced pilots and a buildup of excellent aircraft, there were limited replacements for either. The US, in comparison, had introduced massive training programs for air crews producing a ready supply of trained airmen. Once Japanese pilots were gone there were few well trained replacements. This shortcoming in their air power strategy would hurt them as the war progressed. Ultimately, it contributed to the downfall of Japanese air superiority.



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Lieutenant Zenji Abe commanded a flight of Vals during the attacks on Dutch Harbor.



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Japanese Airmen receive briefing while on Kiska Island.

The US also had the advantage of a high-tech industrial capacity. Over the course of the war the US produced five times as many aircraft as Japan. Japanese manufacturers depended on multiple small machine shops to produce aircraft and could not get new designs into production. Once geared to produce Zeros, they could not efficiently improve the aircraft or introduce improved designs. Changes did occur throughout the war but they were slow and late in coming.

Even with their shortcomings, the Japanese produced some incredible aircraft. Some of their best designs, such as the Mitsubishi A5M or its successor, the A6M Zero, were used in the Aleutian Islands.

The System of Allied Code Names

The US code name system for Japanese aircraft originated in the middle of 1942 out of the urgent need to accurately and quickly identify the axis aircraft encountered in combat. Early on, allied personnel often struggled to do this. Prior to Pearl Harbor, very little was known about Japanese military air assets of any type. Compounding the need was that the Japanese naming designation system was confusing. It used two names to each aircraft; the manufactures alphanumeric project code, similar that of the US Navy and an official military designation which included the Japanese Imperial calendar year the aircraft entered service and not the Gregorian calendar year Allied servicemen were accustomed to using, thus making it hard to remember.

US Army Intelligence Officer Captain Frank T. McCoy of Nashville, Tennessee became head of the “Material Section” of the Allied Air Forces, South-



E7K Alf on Attu. Nicknamed Alf, it was a three seat reconnaissance aircraft that saw limited service in the Aleutians.

west Pacific Area Headquarters out of Eagle Farm Airfield in Brisbane, Australia. He and his team began devising a more succinct method of identifying and classifying Japanese aircraft. Paying homage to his southern roots, Captain McCoy, along with T Sgt Francis “Fran” Williams and Corporal Joseph Grattan, initially assigned names such as Zeke, Rufe, Nate, and Jake to Japanese aircraft—chosen so that they were short, simple and easy to remember. Seventy-five code names were assigned the first month, 122 in all. Shortly thereafter, the nicknames went into use throughout the entire Pacific and were used by both the US and British Commonwealth forces.

The summer of 1944, a joint Army-Navy Air Technical Center in Washington took over respon-

sibility for assigning the names. The code-naming conventions initially devised were assigned according to the following system:

Fighters and reconnaissance seaplanes: male names

Bombers, attack/dive bombers, reconnaissance aircraft, flying boats: female names

Transports: names beginning with the letter T

Trainers: tree names

Gliders: bird names

In the following pages, Japanese aircraft are listed by the model number but are most commonly referred to by the Allied code names by which servicemen came to know them.



The Japanese Bombers

Nakajima B5N Kate

Aichi D3A Val

Mitsubishi G4M Betty

*Left: Japanese torpedo bombers, "Kates"
flying above Dutch Harbor, June 3rd, 1942*

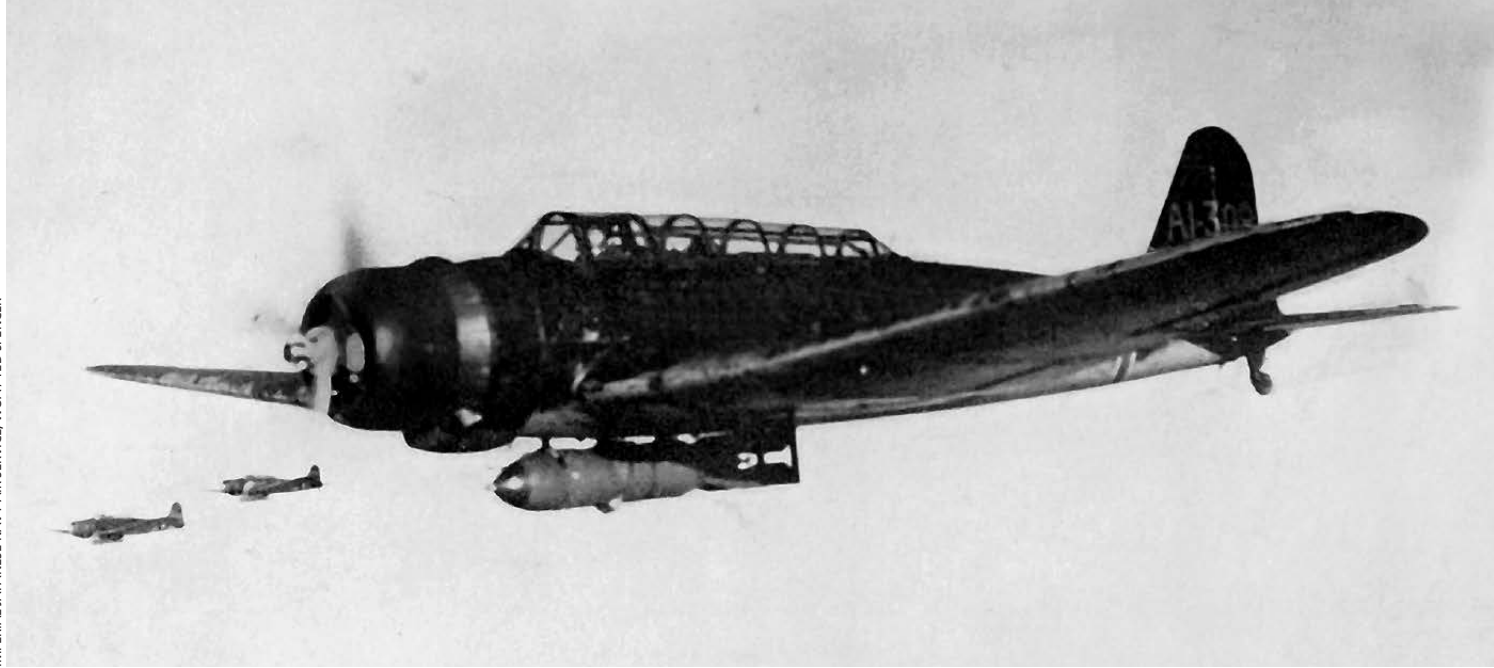
673D AIR BASE WING HISTORY OFFICE

Nakajima B5N Kate

Type 97 Carrier Attack Bomber
(九七式艦上攻撃機)



IMPERIAL JAPANESE NAVY AIR SERVICE, WOA / TED SPENCER



The Kate was the most modern type of carrier-borne torpedo bomber of any of the world's navies in 1941.

Model:	B5N2
Power:	One Sakae 11 fourteen cylinder radial engine rated at 1000 hp
Top Speed:	235 mph
Cruise Speed:	162 mph
Range:	608 miles
Ceiling:	27,100 feet
Bomb Load:	1760 lb torpedo or an equivalent weight in bombs or depth charges
Armament:	One flexible rearward firing 7.7mm Type 92 machine gun
Crew:	3 - pilot, observer/navigator/bombardier and radio operator/gunner

Best in Service

The Type 97 carrier-borne attack bombers (B5N series of torpedo bombers, “Kates”) were considered the best of their type anywhere in the world by the time the Americans entered the conflict late 1941. In 1935, Katsuji Nakamura’s design team at Nakajima were tasked with creating a more advanced torpedo bomber. The results featured a beautifully clean low-wing monoplane with a hydraulically operated retracting undercarriage. The large wing folded upwards hinging so that the wingtips overlapped one another when folded above the long “greenhouse style” cockpit. This allowed the aircraft to fit onto the carrier elevators.

In 1937, Nakajima simplified the second prototype, B5N1, by replacing the engine with the newer Hikari 3 complete with a constant-speed propeller—the first ever fitted to a production Japanese naval plane. They also switched the original Fowler flaps to a more conventional type and replaced the hydraulic wing-folding mechanism with a manual one.

Still lagging in performance, particularly speed, in 1939, designers replaced the engine again with a 1,000 hp Nakajima Sakae and redesign the cowling. This design, the B5N2 model, stuck, and it was the last in the production series.

When the Pacific War exploded in all its fury on December 7, 1941, the Nakajima B5N2 “Kate” carrier torpedo bomber was the best in service with any of the world’s navies—at least for a short time period. Like all the early Japanese war planes the Kate lacked armor. Coupled with slow speed and lack of forward firing guns the Kate was like a sitting duck in combat. Despite its weaknesses the Kate had its success in the Pacific Theatre.

One hundred and forty-four Kates participated in the Pearl Harbor attack as torpedo and level bombers destroying the *USS Arizona* and crippling the American Pacific Fleet’s battleship force. During the following twelve months, carrier-based B5N2s assisted in sinking three American aircraft carriers: *USS Lexington* at Coral Sea, *USS Yorktown* at Midway, and *USS Hornet* at the Battle of Santa

At Dutch Harbor the Kate's bombs found their targets. Over two days they destroyed the radio station, warehouses, anti-aircraft positions, pier and other shore installations.

Cruz, while land and carrier-based B5N2s supported Japanese amphibious landings on all fronts.

After staggering losses in the Solomons, Marianas and Philippines, the Kate was clearly obsolete and was replaced by the B6-N "Jill" beginning in 1943.

Throughout its service history, Japan built 1,149 B5N; 669 by the parent company Nakajima (1936 and 1941), 200 by Aichi (1942-43), and 280 by the Naval Air Arsenal at Hiro (1942-43).

Service In the Aleutians

The carrier-based Kate's service in the Aleutians was short but costly to the Americans. On May 25, 1942, under the command of Lieutenant Masayuki Yamagami, 21 Kates were on board the seasoned carrier *Ryjuo* and underway from Ominato, Japan to the US military base of Dutch Harbor on Unalaska Island. The *Ryjuo* was part of Japan's 2nd Carrier Task Force sent to secure a foothold in the Aleutians. One week later, 180 miles south of the target, 14 Kates, which had been configured and utilized as horizontal bombers, waited on the pitching deck with anticipation, the weather was lousy but typical.

At 3:40 am on June 3, Lieutenant Hiroichi Samejima led his squadron of seven Kate torpedo bombers, each armed with one 550-pound and four 150-pound bombs, off the carrier and into the fog hugging the water at just 300 feet. A second wave of Kates, led by Lieutenant Yasatake Yamagami, departed just under an hour later.

Once in position, their objective was to coordinate a multi-directional bombing run at 6,000 feet, while

the Zero pilots came in low and strafed whatever they could find. The Kates were able to launch at least four waves of attacks that morning hitting the radio station, warehouses, and destroying an SCR-271 fixed, long range aircraft warning radar set. The biggest loss occurred when the Kates hit the Army barracks at Fort Mears killing twenty-five soldiers. Five more lost their lives in the attacks that day.

They were part of a second attack the following afternoon, this time damaging two anti-aircraft positions and the seaplane hangar, and killing six men on the ground. The Kates had left their mark on the remote base. Out of all the aircraft in the attacks, it was the Kates that took the most lives.

In comparison, only one Kate was lost, its crew rescued from the frigid North Pacific.

But like many other aircraft up there, the short range of the aircraft limited its use in the Aleutians after the initial attack, where long overwater missions were the norm. Towards the later stages of the war, US airmen saw the torpedo bombers again over the Kurile Islands where the Japanese used the aircraft for short range reconnaissance patrols from the home islands.

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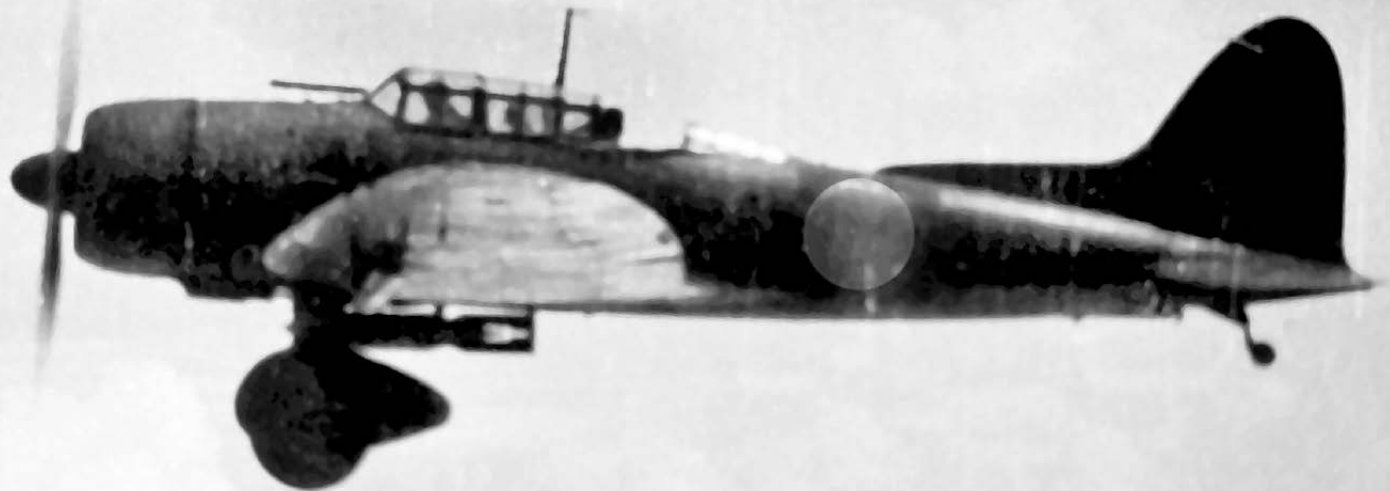
Aichi D3A Val

Navy Type 99 Carrier Bomber Model 11
(九九式艦上爆撃機)



Model:	D3A1
Power:	One Kinsei 44 fourteen cylinder radial engine rated at 1070 hp
Top Speed:	240 mph
Cruise Speed:	184 mph
Range:	915 miles
Ceiling:	30,500 ft
Bomb Load:	One single 550 lb bomb carried under the fuselage and two additional 130 lb bombs carried on wing
Armament:	Three. Two forward-firing 7.7mm Type 97 machine guns and one flexible rear firing
Crew:	2 - pilot, observer/gunner

IMPERIAL JAPANESE NAVY AIR SERVICE. WOA / TED SPENCER



The Val acquired a terrifying reputation in the early days of the Pacific War, but by 1942 its future as an effective air asset did not look as promising.

The Japanese Symbol of Superiority

The Aichi D3A Type 99 Carrier Bomber Model 11 or “Val”—the Allied reporting name for the airplane—was for the Japanese Imperial Navy what the Stuka once was for the Luftwaffe: the standard dive bomber. In 1936, the Aichi company answered a request from the Navy for a new carrier-based dive bomber to replace the existing D1A biplane they were using. Competing against Mitsubishi and Nakajima for the contract, the engineers at Aichi introduced the first prototype of the airplane in 1937. Numerous redesigns finally led to the accepted version with the designation of D3A “Val” in 1939. It was the first aircraft to carry the insignia of the rising sun and it went on to become the most successful dive bomber that the Imperial Japanese Navy ever had.

The low-wing monoplane with fixed landing gear

acquired a terrifying reputation in the early days of the Pacific War. D3A1, the newer version, was highly maneuverable which also allowed it to perform well as a fighter when needed despite its slow speed. Well trained and experienced pilots bombed their target with great accuracy. It became the primary carrier borne dive bomber for the Imperial Japanese Navy and was involved in every IJN action throughout the war. Along with the Kate (Nakajima B5N), it proved its worth at Pearl Harbor and in many other Pacific campaigns.

Although known for being used off carriers, the early versions of the dive bomber were used to support the Imperial Japanese Army at land bases over China and later the Philippines.

By 1942, the Val’s fortune had begun to fade. The plane suffered increasingly from the problems of the Japanese

“We used eleven planes. We found our targets through a small hole in the clouds. Flak from anti-aircraft guns covered the sky around us. We felt very irritated until we left this area. After our bombing attack, we crept around until we came into the Bering Sea.”

— Japanese Val pilot, Lieutenant Zenji Abe

Naval Air arm in general, but also from facing much more capable Allied defenses and air frames. New and better allied fighters appeared on the stage but, more importantly, the crack pilots at the start of the war had been decimated at Midway and in the Solomons. The Val was ultimately replaced from 1944 onwards by the Judy (Yokosuka D4Y Suisei) on the deck of the heavy carriers.

Service in the Aleutians

The Vals were part of the main attack force sent forward in the initial bombing of Dutch Harbor. On board one of Japan's new aircraft carriers, *Junyo*, Japanese forces awoke in the early morning hours of June 3, 1942. They were 180 miles south of the target. They had little intel of the base they were about to attack and rolling seas and impenetrable fog covered the area—not an ideal start for an assault on American forces at Dutch Harbor. Weighing the variables, Lieutenant Commander Masatake Okumiya made the final call to move forward with the offensive as planned. At 3:45 am the first of the Vals left the deck of the carrier, each one carrying a 550-pound bomb.

Commanded by Lieutenant Zenji Abe, the thirteen Vals joined the *Junyo's* Zeros and the *Ryujo's* combined force to fly in loose formation along the eastern edge of Unalaska Island. En route, since the

weather was deteriorating and it was doubtful it would improve enough for his Vals to be effective, Lieutenant Abe aborted the mission and ordered them to return to the carrier. All but two of *Junyo's* Zeros also turned back.

June 4th, a day of reparation for Vals, Admiral Kakuta spent the early part of the morning waiting for a needed break in the weather. Seeing no improvement, he decided to commit only his best pilots for the planned attack. Launched from the two carriers were 11 Zero Fighters, 9 Kate horizontal dive-bombers and 11 Val dive-bombers.

The fighters were the first to arrive strafing the facilities and positions at Dutch Harbor. The dive bombers followed and inflicted considerable damage scoring hits on the beached steam ship *SS Northwestern* and the nearby Naval Air Station pier. Bombs destroyed the newly built fuel tanks setting 22,000 gallons of fuel ablaze and sadly, one errant bomb hit the civilian Native hospital. Mission completed, for the moment: the Vals were unscathed. Carrier bound, they swept across Unalaska Bay and set course along the north side of the island to rendezvous with the rest of the force at Maru Nishi or Ship Rock, an enormous saddle shaped rock, just three miles east of the US secret air base at Otter Point on Umnak Island. Cruising along just under the clouds at one

thousand feet above sea level, the approaching Vals were surprised to encounter American P-40s as Japan had no knowledge of the cleverly undisclosed airbase in front of them. A dogfight ensued as eight P-40s went after the three Vals. It was “a confused melee,” as Lieutenant Zenji Abe later described it. The Vals were no match for the P-40s as two Vals, flown by Lieutenant Numata and Squadron Leader Harano, were quickly shot down. Another two were so badly damaged that they did not make it back to the carrier, instead declaring *Bonzai* to the Emperor as they disappeared into the North Pacific. Of the 11 Vals that went out that day, only 6 returned.

This would be the last Allied encounter with the Vals in the Aleutians, but it made an impression. The *Junyo* was called away to Guadalcanal. The carrier-based attack on Dutch Harbor was the last of the Aleutian Campaign and lack of airstrips prevented the Japanese from further utilizing Vals from their strongholds at Kiska and Attu.

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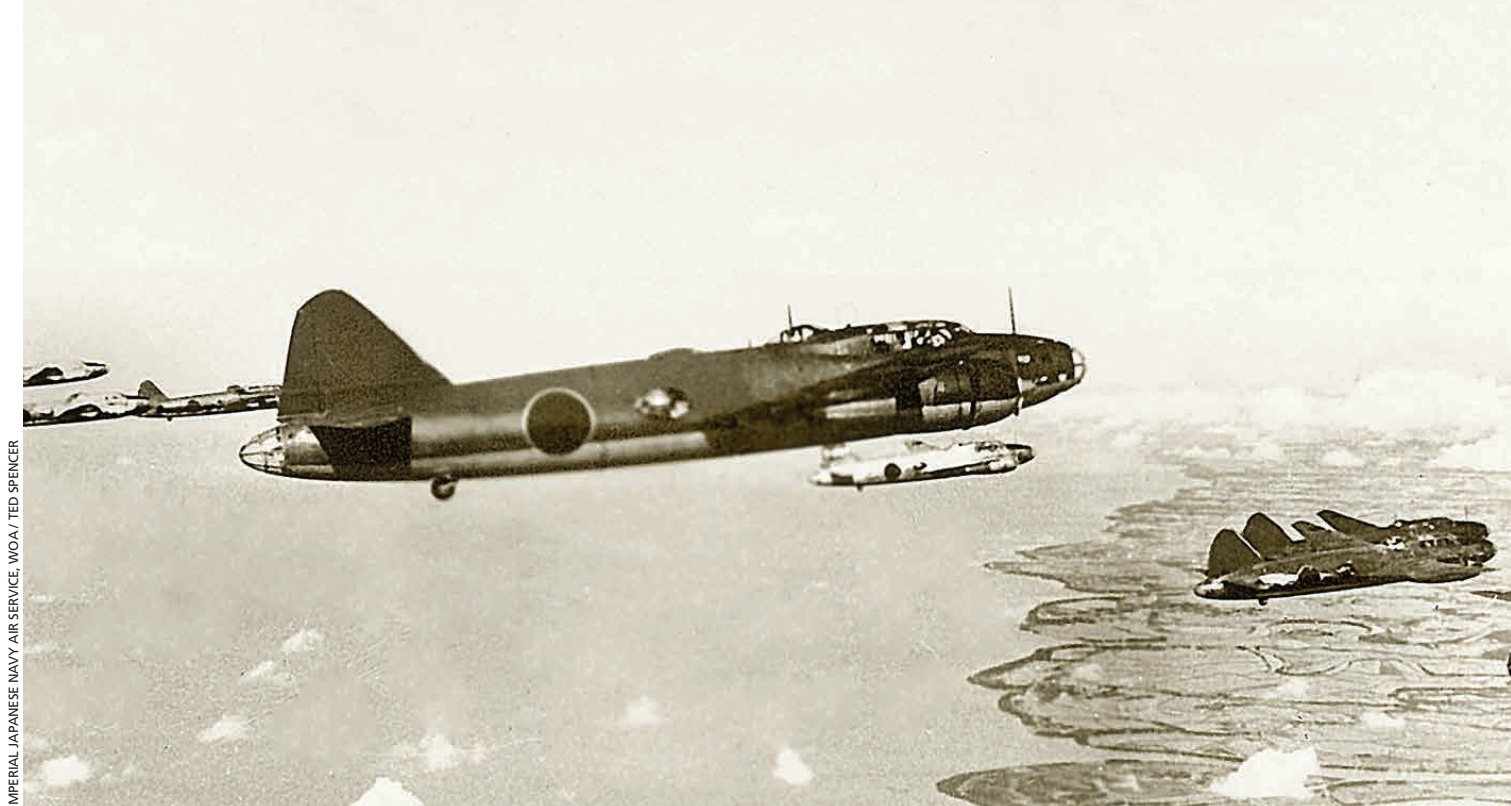
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Mitsubishi G4M Betty

Navy Type 1 Attack Bomber
(式陸上攻撃機)



Model:	G4M2 Model 22
Power:	Two Mitsubishi Kasei 21 fourteen cylinder radial engines rated at 1800 hp
Top Speed:	272 mph
Cruise Speed:	196 mph
Range:	3765 miles
Ceiling:	29,365 feet
Bomb Load:	Internal, 2205 lbs or one 1764 lb torpedo
Armament:	Six. Four 7.7mm Type 92 machine guns in the nose and ventral positions, two 20mm Type 99 canons in tail and top turret.
Crew:	7-9 - Pilot, Co-pilot, navigator/bombardier/ nose gunner, radio operator/ waist gunner, engine mechanic/waist gunner, tail gunner



Its long range allowed the Betty to appear in places where the Allies least expected them.

Japan's Most Famous Bomber

The G4M—Allied reporting name Betty—was the main, land based, heavy bomber of the Imperial Japanese Navy during World War II. It was known to those who flew it as the Hamaki or “cigar” in Japanese, a reference to its cigar-like shape. The Betty was a familiar sight everywhere the Imperial Navy operated throughout the war. It remains today Japan's most famous bomber.

In 1937, requesting a replacement for the new G3N Nell that was currently in service, the Navy considered the vast distances in the Pacific and range became a primary consideration in the new design. Engineers at Mitsubishi, led by Kiro Honjo, were given very strict performance parameters to adhere to. What they produced was

the B4M-2 Model 11, an aerodynamic bomber that had the unprecedented capability to fly long ranges while fully armed. This feature turned into its main advantage as it allowed the bomber to strike Allied forces in the farthest reaches of the territory.

It was responsible for some of the Navy's most stunning coups. In 1942, G4Ms were engaged in combat in New Guinea, the Netherlands Indies, the Solomons and the Aleutians. Because of its long range, the Betty was able to appear in places where the Allies least expected land-based aircraft leading to speculation that the Japanese had found a way to base these twin-engine bombers on carriers. This advantage though, came at a terrible cost for the crew, passengers, and in the long run, even for

In May 1943, the 54th Fighter Squadron turned back a flight of 16 Betty's destined for Attu, shooting down five in a running battle that lasted 25 minutes.

Japan itself.

It did not take the Allies long to find the Achilles' heel of the Betty. The incredible range of the bomber had been achieved by minimizing its weight through the omission of self-sealing fuel tanks and crew protecting armor on the fuselage. Because of this, the Betty was fatally vulnerable to exploding when hit and was dubbed the "flying lighter" —a fire waiting to happen. Like several of their other aircraft designs, adequate thought had not been given to protection of the crew until late in its history but by then it was too late, the losses suffered were too great to overcome.

In fact, on April 18th, 1943, Admiral Isoroku Yamamoto, mastermind of the attack on Pearl Harbor and Commander of the Combined Fleet, succumbed to the weaknesses of the Betty himself when on his way to inspect bases in the Solomons as a passenger, his B4M was shot down over Bougainville by American P-38s and was killed.

In all, Mitsubishi produced a total of 2,414 G4M airplanes of various versions, a remarkably high figure for a Japanese medium or heavy bomber. Very few remained when the war ended. Four days after the cessation of hostilities, on perhaps the most significant mission the bombers would see, two Bettys painted in special "surrender markings" —white with green crosses replacing the red Imperial Japanese Hinomaru insignia—landed in the Philippines. On board were the Japanese surrender delegation. General Douglas MacArthur and Allied

representatives witnessed the official signing of the Japanese Instrument of Surrender agreement. The end had arrived for the Imperial Japanese and the famous Betty bomber.

Service in the Aleutians

The 24th Air Flotilla based at the Kataoka Naval Base on Shimushu Island, roughly 800 miles west of Attu, had at its disposal 36 Mitsubishi G4M1 "Betty" twin-engine bombers. The Japanese employed these bombers briefly during the Battle of Attu in an effort to support their ground forces during the US push to retake the island in May 1943. Several attempts to bomb Allied positions and resupply their own garrison on the island were made by the Bettys but weather and US control of the air seriously hampered their efforts.

May 23rd, a patrolling PBY spotted a formation of Bettys west of the island. P-38 crews from the 54th Fighter Squadron out of Amchitka were on combat air patrol in the area and were ready to pounce when the bombers crossed the island. In a running battle, five Bettys were shot down, three of them credited to Lieutenant Frederick Moore, the highest score by an Aleutian fighter pilot in a single day. Lieutenant Larry C Higgins and Lieutenant Colonel James R. Watt, now Commander of the 343rd Fighter Group, were credited with the other two. Incidentally, Lt. Col Watt's plane was badly damaged in the fight and he disappeared on the

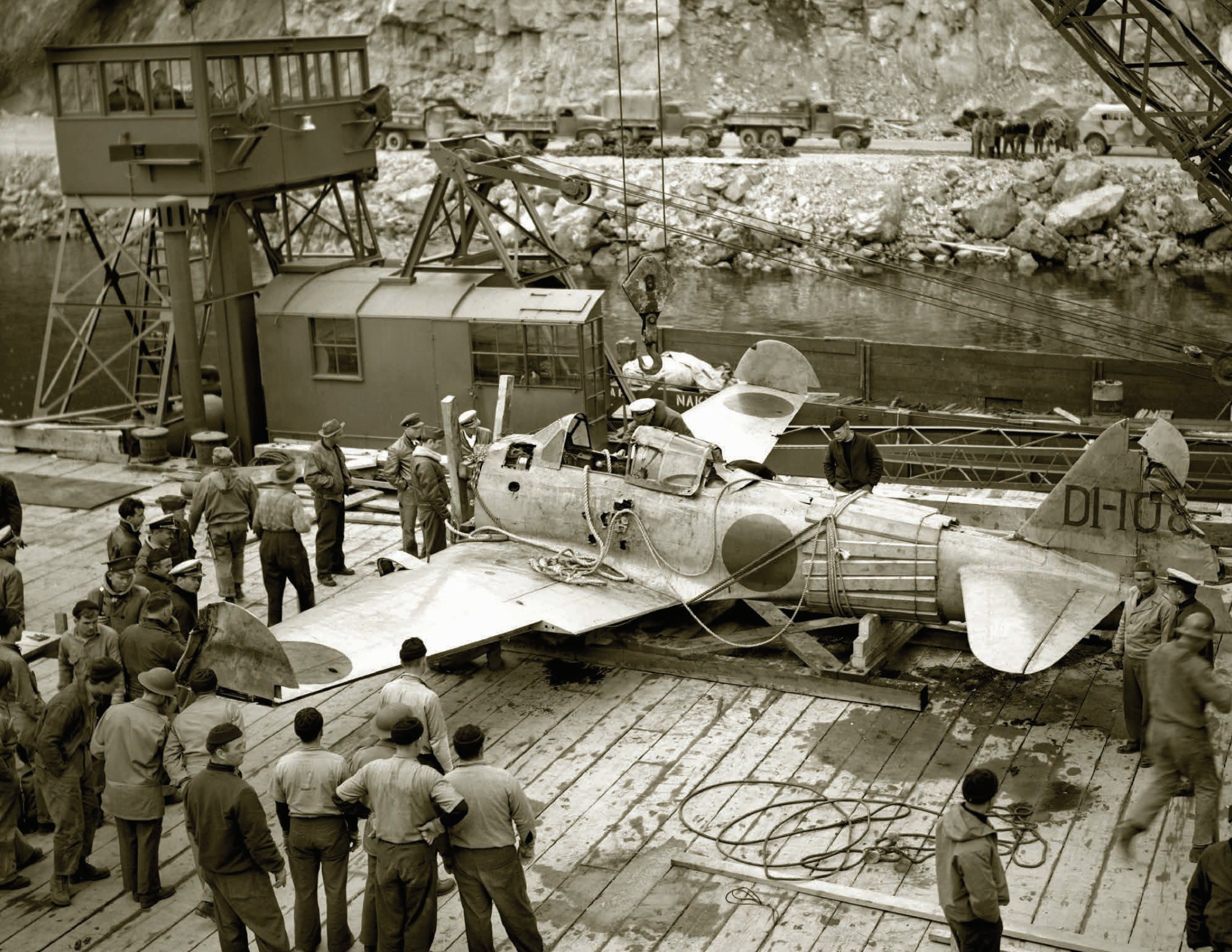
way back to base. These aerial victories over Attu were the last of the Aleutian Campaign.

The fleet of Betty bombers on Shimushu continued to harass Allied forces at sea, launching torpedoes on American ships but with little success. Once the Japanese were expelled from the Aleutians, the Bettys attempted bomb runs on the American troops now occupying the island of Attu as well as the neighboring island of Shemya. One attack occurred on October 13, 1943, when radar picked up blips off Alexei Point, and fighters were scrambled. Eight Japanese Betty bombers arrived over the Temnac Valley on Attu dropping nine bombs on the area. Most landed in the water nearly hitting a cargo vessel and three landed on the base. Three men were slightly wounded in the attack and several communication lines were severed. This marked the last raid of the war to take place against the American homeland.

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The Japanese Fighters

Aircraft That Could Go the Distance

The “big three” Japanese aircraft industry manufacturers were Mitsubishi, Nakajima and Kawasaki. Each began their operation within the first decade of the century, depending heavily on foreign technology and the expertise of French, English and German technicians. Young Japanese engineers also studied in American factories and top engineering schools. By 1936 Japan was independently producing several types of military aircraft.

While initially Japan may have been overlooked as a leading nation in aircraft development and production, it did pull together an efficient industry that developed several formidable aircraft including the Mitsubishi A5M Claude which put Japan on the aircraft design map. The Claude was validated further by its successor the A6M Zero which, without question, dominated skies during the early part of the war. The Nakajima Ki-43 Hayabusa Oscar was another well-respected Japanese attack aircraft.

The tragedy of Japan’s aircraft industry was its failure to prioritize sound structure over the lives of their crew, as well as its inability to expeditiously modify and manufacture new aircraft in order to meet the changing needs of an air war. Throughout the life of Japan’s most reputable fighter, the Zero, it only saw four revisions. In comparison, the Allies were producing new aircraft or variations of old ones and at a rapid rate. Japan simply did not have the industrial resources to keep up.

Left: Tadayoshi Koga’s Zero preparing for transport to San Diego aboard the USS St. Mihiel after being recovered off of Akutan Island.

UNITED STATES NAVY, WOA / TED SPENCER

Mitsubishi A6M Zero

Nakajima A6M2-N Rufe



Mitsubishi A6M Zero

Navy Type 0 Carrier Fighter
(零式艦上戦闘機)



Model:	A6M2
Power:	One Nakajima Sakae 12, fourteen cylinder radial engines rated at 940 hp
Top Speed:	332 mph
Cruise Speed:	204 mph
Range:	1930 miles
Ceiling:	32,810 feet
Bomb Load:	Two external 132 lb bombs
Armament:	Four. Two forward-firing 7.7mm Type 97 machine guns in the upper fuselage and two wing mounted 20mm Type 99 cannons.
Crew:	Pilot

IMPERIAL JAPANESE NAVY AIR SERVICE, WOA / TED SPENCER



The Allies were thoroughly intimidated by the Zero, but over time devised tactics that allowed them to hold their own against it.

A Very Good Aircraft, With Distinct Weaknesses

The A6M2 Type 0 Carrier Fighter, Allied name Zero (also referenced as Zeke), is probably the best-known Japanese single engine fighter of the Second World War. It is the pinnacle of Japanese fighter design, and few American fliers could beat it in a dog fight with a competent Japanese pilot. Eventually creative maneuvers, like the Thatch Weave, were established and allies alike regained some semblance of control. Even so, the Zero remained a competitive adversary until the final kamikaze of the war.

In 1937, the Imperial Japanese Navy requested a fighter that could intercept and destroy attacking enemy bombers, escort Japanese Bombers on missions, and perform better in combat than any enemy interceptor.

In response, Mitsubishi designer Jiro Horikoshi crafted a light, fast, maneuverable, incredibly long-distance fighter that surpassed any other attack aircraft in existence. The A6M was a sleek low-wing design, primarily constructed of a lightweight aluminum alloy called “Extra-Super Duraluminum” (ESD). The aircraft’s new and innovative construction methods were necessary in helping it achieve the performance goals specified by the Japanese Navy. However, the severe limits on weight ensured that the new fighter had weaknesses that reflected several engineering trade-offs: mainly armor and self-sealing fuel tanks.

Although American aircraft like the Grumman F4F Wildcat fighter was inferior to the Zero in almost all aspects of performance, the ruggedly built Grumman could easily take ten times more punishment than the lightly

The significance of the Allies' capture of Koga's plane is "no less serious than the Japanese defeat at Midway...It did much to hasten our final defeat."

– Lieutenant Commander Masatake Okumiya, Commander of the Zero squadrons during the bombing of Dutch Harbor.

built Zero. As a result, combat attrition was steadily eliminating the Japanese Navy's best pilots as well as their miraculous machines. The Navy could not provide adequate training to the needed volume of replacements. Their pilots, once experienced and confident, were becoming increasingly outmatched by seasoned Allied fliers.

The Japanese aircraft industry attempted to design and produce improved fighters to replace the Zero, but Japan simply did not have the engineering and manufacturing capability to keep pace. The A6M was rapidly becoming outclassed by newer Allied fighters as the war progressed. The Japanese had no choice but to keep on building Zero fighters. By the end of the war 10,449 Zeros had been produced.

Service In the Aleutians

In June of 1942, a Japanese task force launched a strike against the Aleutians in an attempt to draw American forces away from the intended target of Midway. As part of Japan's 2nd Carrier Task Force, two aircraft carriers were equipped with 19 of Japan's new wonder plane—the Zero.

The first attack was launched in the early morning of June 3. The first wave of Zeros flew low and fast through Unalaska Valley and quickly destroyed a PBY in the harbor preparing for takeoff, killing four of its crew. After making several other passes at other Army and Navy facilities, they headed back

to their carriers but not before downing two more Catalinas en route resulting in the loss of another five men. It was a difficult introduction to this new fighter for those stationed in the Aleutians.

The next day, June 4, the US scored one of the largest indirect victories of the entire war by way of Japanese Petty Officer Tadayoshi Koga. Koga launched his A6M Zero off the aircraft carrier *Ryujo* for another strike against the remote base. His luck ran out over Dutch Harbor when he discovered that bullets had pierced his plane and he appeared to be losing oil. He signaled to his commanding officer that he intended to land on nearby Akutan Island which was the predetermined emergency landing site.

Unfortunately, since Koga was unfamiliar with the unique tundra that covers the Aleutian Islands, what looked like solid ground was really a boggy marsh. This caused the plane to nose over onto its back during the landing. Although the aircraft was only slightly damaged, Koga's neck was broken and he was killed. Five weeks later a Navy party found the Japanese fighter upside down in the marsh, the pilot still hanging dead in his straps.

Petty Officer Koga's A6M2 was crated and shipped to North Island San Diego Naval Air Station via the Army transport vessel, the *USS St. Mihiel*. This was one of the greatest intelligence finds of the Pacific War enabling American engineers and test pilots to discover what made this

aircraft so unbeatable. The process of taking it apart and putting it back together was done in secrecy and under high security. By September 25, the rebuilt enemy fighter was ready to be flown. The American-designated Zero 4593, went through an exhaustive series of tests in order to gain information about its strengths and weaknesses. The tests revealed the fighter's faults and finally shattered the mythical aura which had surrounded it.

The findings were quickly passed along to operational units in the Pacific allowing them to improve their tactics against the nimble Zero. Discovering the weakness of the Zero was invaluable and saved the lives of many an Allied pilot. This development eventually shifted control of the skies for good. In 1945, Zero 4593, the Koga Zero, was involved in a training accident while on the ground. It was damaged beyond repair but its legacy would forever be remembered as one of the turning points in the war.

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Nakajima A6M2-N Rufe

Navy Type 0 Carrier Fighter
(零式艦上戦闘機)



Model:	A6M2-N
Power:	One Nakajima Sakae 12, fourteen cylinder radial engines rated at 940 hp
Top Speed:	270 mph
Cruise Speed:	184 mph
Range:	1100 miles
Ceiling:	32,800 feet
Bomb Load:	Two external 132 lb bombs
Armament:	Four. Two forward-firing 7.7mm Type 97 machine guns in the upper fuselage and two wing mounted 20mm Type 99 cannons.
Crew:	Pilot

IMPERIAL JAPANESE NAVY AIR SERVICE, WOA / TED SPENCER



Much like the Zero on which it was based, the Rufe was seen in every battle in the Pacific Theatre.

The Floating Zero Fighter of the Pacific

In the autumn of 1940, the Japanese Navy issued a specification for a single-seat fighter seaplane that was capable of providing air cover for offensive amphibious operations in distant places where land bases were not yet established. At that time, the Japanese Army Engineer companies were not prepared for the task of building airfields at the rate they were being conquered.

Although the Kawanishi Aircraft Company began work on a project to meet the requirement, the Navy wanted faster production. It soon ordered Nakajima to start work on a seaplane adaptation of the Mitsubishi A6M2 Reisen (Zero Fighter) that Nakajima was also building.

In February of 1941, the A6M2 Model 11 with the non-folding wingtips began as the basis for their design.

The retractable landing gear was removed and the wheel wells were faired over. A large central float was mounted and attached to the belly of the fuselage along with two stabilizing cantilever floats that were fitted underneath the outboard wings. The standard power plant and armament of the A6M2 were kept the same with the addition a few other aerodynamic stability requirements and auxiliary fuel tanks now located in the floats themselves. The aircraft was designated A6M2-N with military designation: Navy Type 2 Floatplane Fighter Model 11, Allied codename “Rufe”

The first prototype A6M2-N was flown on December 7th, 1941, same day as Pearl Harbor, with the first batch delivered in April of 1942. As the war in the Pacific progressed, the A6M2-N was encountered just about everywhere and although on floats proved to be quite

maneuverable as proven in the Aleutians. By the end of the war, though, it was primarily used as a fighter seaplane trainer.

A total of 327 A6M2-N floatplane fighters were built by Nakajima at the Koizumi plant between December 1941 and September 1943.

Service In the Aleutians

The Rufe was active throughout the majority of the Aleutian Campaign and became their main attack aircraft while stationed on Kiska, often engaging American fighters and bombers in air battles over Kiska Harbor. It filled a vital defensive need for Japan when no airfields were available.

Allied bombing raids on Kiska began shortly after Japanese invasion of the island. By mid-June, to reinforce their garrison, the Japanese brought in twelve Rufes for air defense against further bomber attacks. The fighter on floats turned out to be an effective weapon in the Aleutians, rising up to meet the American formations as they were coming in to drop their payloads on Japanese installations. On one occasion, P-38 pilots Lt. Frederick E. McCoy and Lt. Herbert Hasenfus, battled it out with a pair of Zeros on floats who attacked them while escorting the LB-30 "Tough Boy" on an anti-submarine and intelligence mission. Hasenfus' P-38 was badly damaged, barely making it back to base though McCoy had better luck shooting down one of the Rufes who came up to challenge him in a head on collision. He was credited with the first aerial victory against the Japanese fighter on floats.

Earlier in July, Jack Marks in his B-17E was the first to succumb to the nimble and very capable floatplane. The B-17s were performing their bomb runs over the Kiska Harbor when they were attacked. Marks' plane was hit and crashed into the



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waters below.

Admiral James Russell, then a commander of VP-42, described the Rufe as an amazing performing aircraft. He noted that its pilots performed aerobatics near US bombers and one pilot once attacked a B-17 while flying upside down.

Weather and combat casualties exacted their toll on the floatplane, particularly at Kiska. The Japanese continued to replace the losses through March 1943 by shipping in crated Rufes aboard transports. They were usually off-loaded at Attu, reassembled and flown to Kiska guided into the harbor by a navigational beacon that was installed at South Head.

Even with replenishments, because of the frequent storms that pounded the area and persistent bombing efforts by US forces, the Japanese were seldom able to maintain more than fourteen float fighter and reconnaissance aircraft at Kiska at one time. The heavy toll on the floating fleet eventually left Kiska with little air support as US air and sea patrols limited further reinforcement of the occupied islands.

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The Japanese Utility Aircraft

More Than Just a Utility Plane

All Japanese utility aircraft used in the Aleutians were either flying boats or seaplanes. The lack of landing fields made water landings a necessity. Flying boats, like the Mavis and Emily were large, four engine aircraft, capable of long-range assignments. In contrast, the smaller seaplanes, such as the Jake, were single engine aircraft used for shorter range operations. The Pete, Alf, and Dave seaplanes retained the open cockpit design popular in World War I, making for a cold ride!

Like the Allied aircraft, Japanese utility planes served a variety of purposes. However, there were some very important differences. For one, Japanese aircraft were not used to transport soldiers to and from the Aleutians. Most were designed for patrol or reconnaissance missions and all types were armed, with some even playing a front-line defense role, as they did on Kiska. The harbor conditions and weather were particularly rough on the lighter utility aircraft resulting in many being destroyed before they ever had a chance to be a formidable threat.

Kawanishi H6K Mavis

Nakajima E8N Dave

Aichi E13A Jake

Mitsubishi F1M2 Pete

Left: Yokosuka Glen, Type 0 Small Reconnaissance Seaplane (零式小型水上偵察機), being launched off of a submarine aircraft carrier somewhere in the Aleutians.

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Kawanishi H6K Mavis

Type 97 Large Flying Boat
(九七式大型飛行艇)



Model:	H6K4
Power:	Mitsubishi Kinsei 46 fourteen cylinder radial engines rated at 1070 hp
Top Speed:	211 mph
Cruise Speed:	138 mph
Range:	3229 miles
Ceiling:	31,530 feet
Bomb Load:	Two 1800-lb torpedoes or up to 2200 lbs of bombs
Armament:	Five. One flexible 7.7mm Type 92 machine-gun in an open bow and dorsal position, and one in each beam blister. One flexible 20mm Type 99 Model I cannon in the tail turret .
Crew:	9 - pilot, co-pilot, bombardier, navigator, engineer, radio operator, and 3 gunners



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The H6K had extreme range and endurance allowing it to undertake 24-hour patrols.

The Flying Boat Capable of Patrolling 24/7

The H6K was a clever prewar metal flying boat design identified by its parasol wing mounted above the hull and attached by inverted-V struts. It shares some similarities to the US Consolidated PBY Catalina but is arguably more attractive and certainly bigger. It served as a long-range maritime patrol bomber and, much less frequently, as a transport aircraft.

In 1934, the Japanese Navy issued a 9-Shi specification for a four-engine flying boat with a monoplane design and an overall performance that included a range of no less than 2500 nautical miles. By 1936, after several trials, Kawanishi favorably answered the call by producing the first H6K1 flying boat. Soon after that, two more prototypes, dubbed H6K2 and 3, were introduced, both

re-engined with a more powerful 1,000hp Kinsei 43 radial engine. H6K3 was modified as a transport plane; only a few were built.

The major production and combat version of the aircraft was the “H6K4 Model 2-2,” which went into service in 1941. It retained the Kinsei 43 engines of its predecessors but enlarge its fuel capacity allowing it to carry 2,950 imperial gallons of fuel. It also added the two beam blister windows along each side of the fuselage. Beginning in August 1941, production moved to the “H6K4 Model 2-3,” fitted with upgraded Kinsei 46 radial engines rated at 1,070 HP each. Later, they were both referred to as “Model 22,” with no distinction for the power plants.

The best asset of the H64K was its extreme range and endurance. It was able to undertake 24- hour patrols. The

The first aerial victory of the war credited to a P-38 pilot came at the expense of a Mavis which was en route to bomb an American tender.

Allies gave the machine the codename “Mavis,” in accordance with the custom that gave Japanese fighters male names and other Japanese planes female names.

Between 1939-1942, 127 Mavis flying boats were built. Sixty-four were in service when the Pacific War broke out in December 1941. The type saw considerable action, particularly in the south Pacific, even conducting bombing raids on land targets in Rabaul and the Dutch East Indies. As allied fighter operations became more successful, the Mavis fell back into primarily a reconnaissance role patrolling the vast distances of the north and south Pacific.

Service In the Aleutians

In June 1942, Commander Sukemitsu Ito's Yokohama-based Toko Seaplane Squadron arrived on Kiska with six Kawanishi H6K4 “Mavis” flying boats and moored them to American buoys previously left behind by Fleet Air Wing Four PBY crews. Originally, the Japanese had intended to use the long-range flying boats to conduct patrols between the Aleutians and Midway Island. Instead, they not only used them for local patrol searches but also to conduct bombing missions as far away as Atka Island where the flying boats attacked the tenders Casco and Teal which, along with PBYs from VP-43, were staged in Nazan Bay in support of the planned naval bombardment of Kiska

scheduled for August 7.

To protect the fleet in the bay, the Eleventh Air Force committed aircraft to combat air patrol. On August 4, during the third patrol of the day, Lieutenants Kenneth Ambrose and Stan Long, 54th Fighter Squadron scored the first P-38 aerial victory of World War II by shooting down two of three Japanese Mavis flying boats who had come to attack the American ships in the harbor. Three more Mavis were lost at Kiska a few days later during the naval bombardment itself.

Overall, Mavis losses in the Aleutians were high, limiting their role in Japan's defense of the occupied islands. Of the six aircraft originally sent to Kiska,

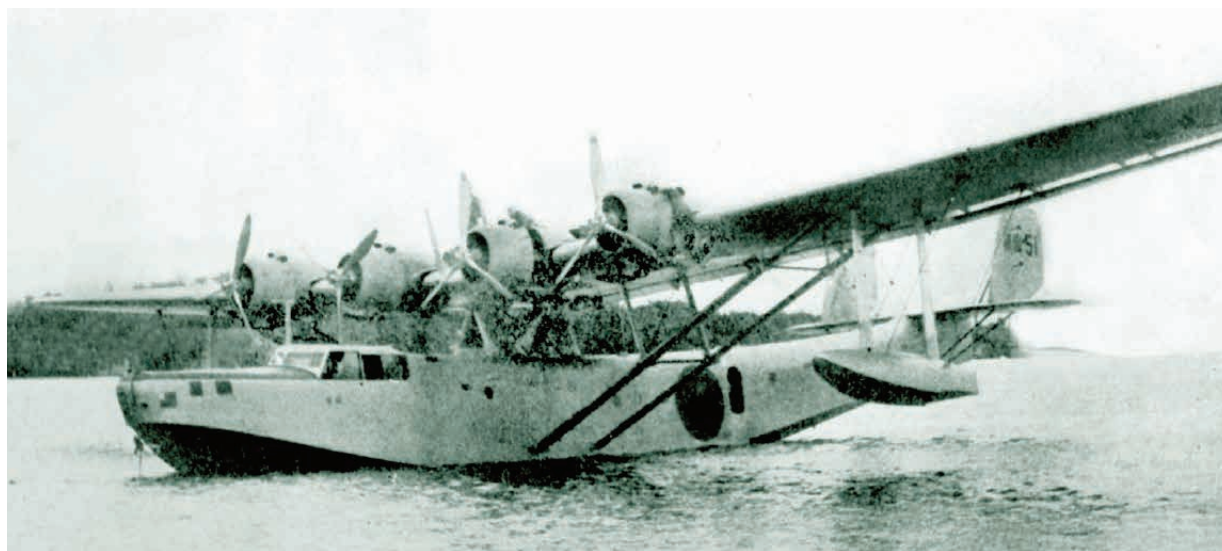
all of them were lost with very few replacements sent to replenish the fleet.

Ultimately, the Aleutian environment and relentless bombing efforts proved to be too much for the flying boat on Kiska. Commander Ito withdrew the remaining Mavis on August 17 leaving the Japanese with no offensive capability aside from single-engine seaplane fighters.

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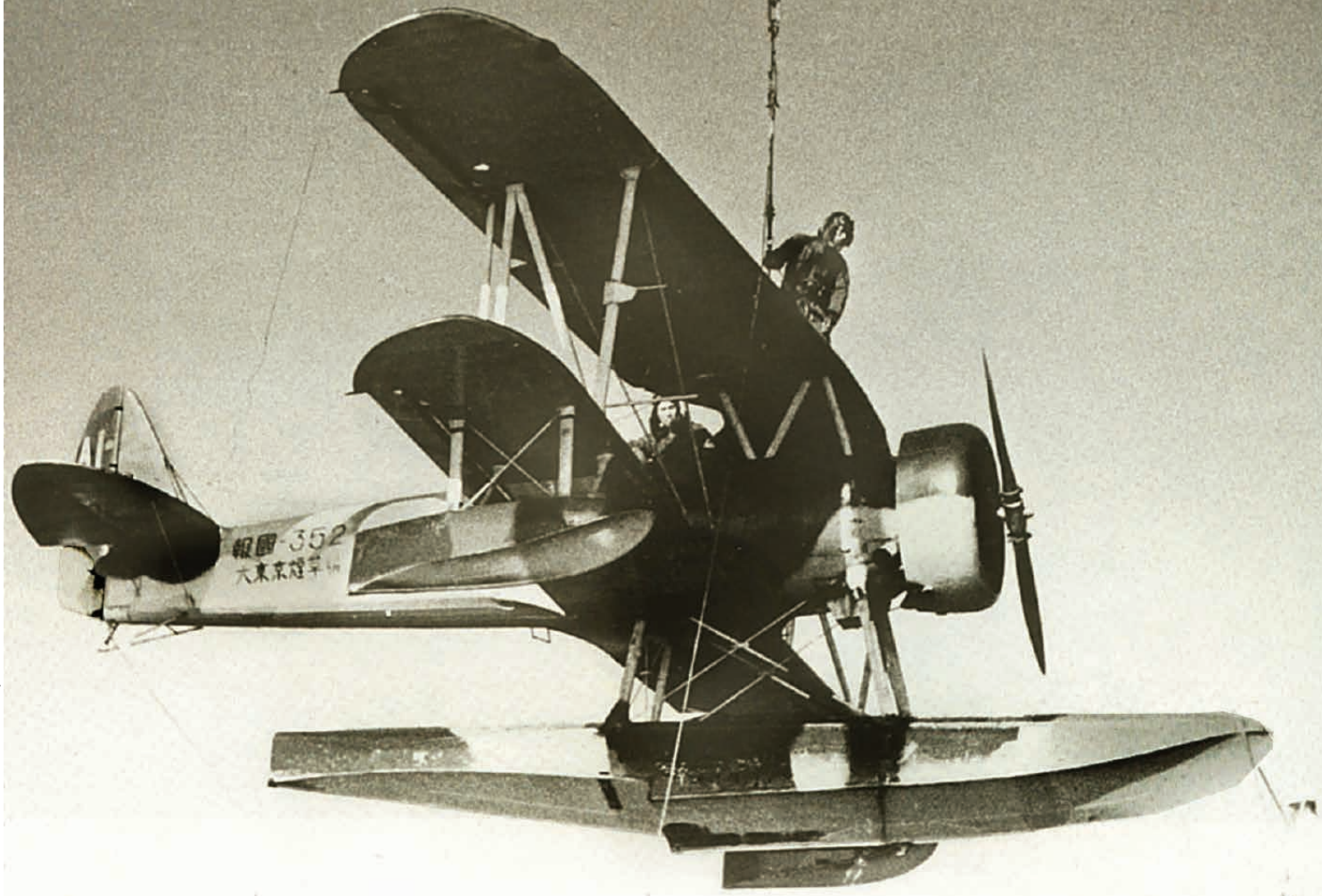
Nakajima E8N Dave

Type 95 Reconnaissance
Seaplane Model 1
(九五式水上偵察機)



Model:	E8N2
Power:	One Kotobuki 2 KAI 2 nine cylinder radial engine rated at 630 hp
Top Speed:	186 mph
Cruise Speed:	115 mph
Range:	558 miles
Ceiling:	23,850 feet
Bomb Load:	Two 66-lb bombs carried externally
Armament:	Two. One 7.7 mm machine gun firing forward and one firing aft.
Crew:	2 - pilot, radio operator/ gunner

IMPERIAL JAPANESE NAVY AIR SERVICE WOA / TED SPENCER



The open cockpit E8N was a sturdy biplane but vulnerable with its metal fabric construction.

A Cold Ride

The E8N Dave was a sturdy float biplane, used as a catapult-launched reconnaissance aircraft on tenders, cruisers and battleships. It was the answer to a 1933 Japanese Navy specification calling for a two seat float spotting aircraft that was set to replace the Nakajima E4N2 currently in service.

The updated aircraft was of metal structure with fabric covering and accommodated two crew in an open cockpit. The E8N1 officially went into service towards the end of

1935 as the Navy Type 95 Reconnaissance Seaplane Model 1. Further improvements were made by upgrading some of the equipment and swapping the 580hp Kotobuki 2 KAI 1 with a slightly more powerful 630 hp Kotobuki 2 KAI 2 engine, both driving a two bladed propeller. This type became the E8N2, the last in the series.

The Dave was produced from the mid-30s until 1940 and saw a fair amount of action aboard Japanese naval vessels with particular success in the Sino-Japanese war. Many were still in service towards the end 1941, but they

The outdated Dave was the first seen in the Aleutians during the attack on Dutch Harbor. Allied P-40 aircraft shot down two unsuspecting Daves off Umnak Island.

were soon relegated to liaison, training and communication duties.

In total, 755 were built: 707 by Nakajima and 48 by Kawanishi.

Service In the Aleutians

The first group of Daves were part of the 2nd Carrier Division task force which sat aboard the cruisers Takao and Maya. While Japanese Kate and Zero fighters converged on Dutch Harbor on June 3, 1942, four Nakajima E8N Dave seaplanes were launched from the decks of their cruisers and assigned the duty of finding US Naval ships reported to be in the area. Unbeknownst to the Japanese fleet, an airbase on neighboring Umnak Island had been cleverly disguised as a fish packing plant. Seemingly out of nowhere, two P-40Es from the 11th Fighter Squadron stationed at this secret base encountered the enemy planes and quickly shot down one of the unsuspecting E8N Dave aircraft as they were coming around the western edge of Unalaska Island.

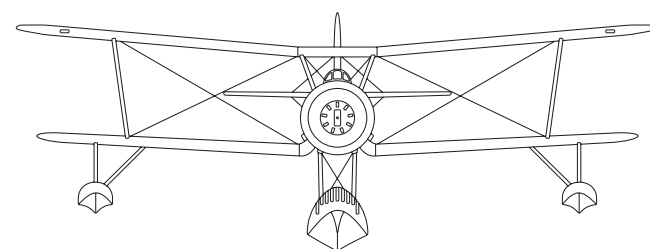
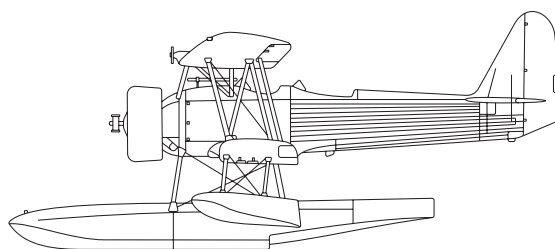
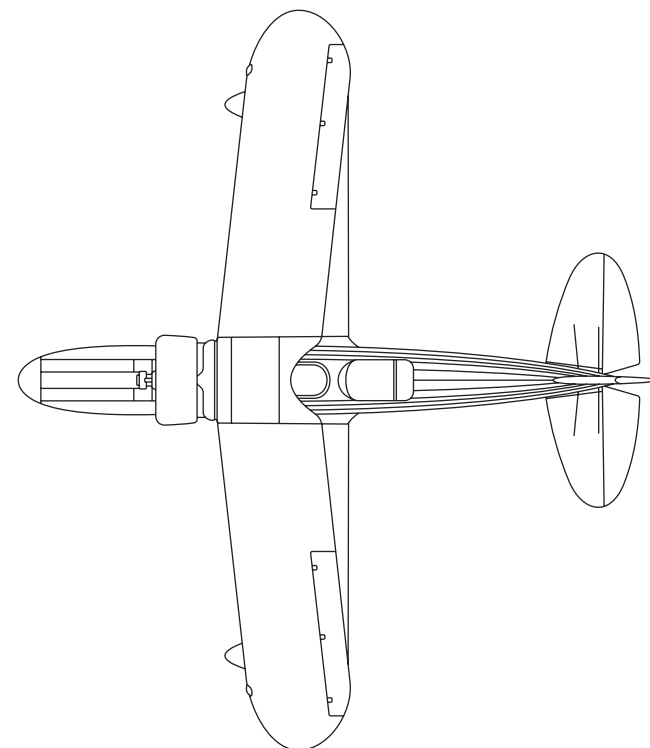
During a midday air patrol, several hours after the initial Japanese attack on Dutch Harbor, Lieutenant John B. Murphy and Jacob Dixon spotted the two Japanese float-reconnaissance aircraft. The two broke formation in pursuit. Murphy fired off a short burst from his .50 caliber machine guns which hit the slow-moving biplane. It crashed into the water at the end of the runway at Otter Point. The other Dave disappeared into the safety of the clouds. Lieutenant Murphy and his wingman, First Lt. Jacob W.

Dixon, received joint credit for shooting down the first Japanese aircraft of the campaign.

Later, the Daves were employed in the Aleutians in greater numbers operating from the waters of Kiska Harbor as part of the 51st Base Air Unit. The Japanese seaplane tender, Kamikawa Maru, arrived in Kiska Harbor shortly after the occupation of the island and off-loaded fourteen Daves and four Mitsubishi F1M2 "Pete" two-seat, single float reconnaissance monoplanes. They conducted reconnaissance and anti-submarine patrols. Within a few months, many or all of the Daves were unserviceable either as a result of the relentless surf in the harbor or as a result of the US bombardment.

Further Reading

Smith, Blake. *Warplanes to Alaska*. Surrey, British Columbia: Hancock House Publishing, 1998.



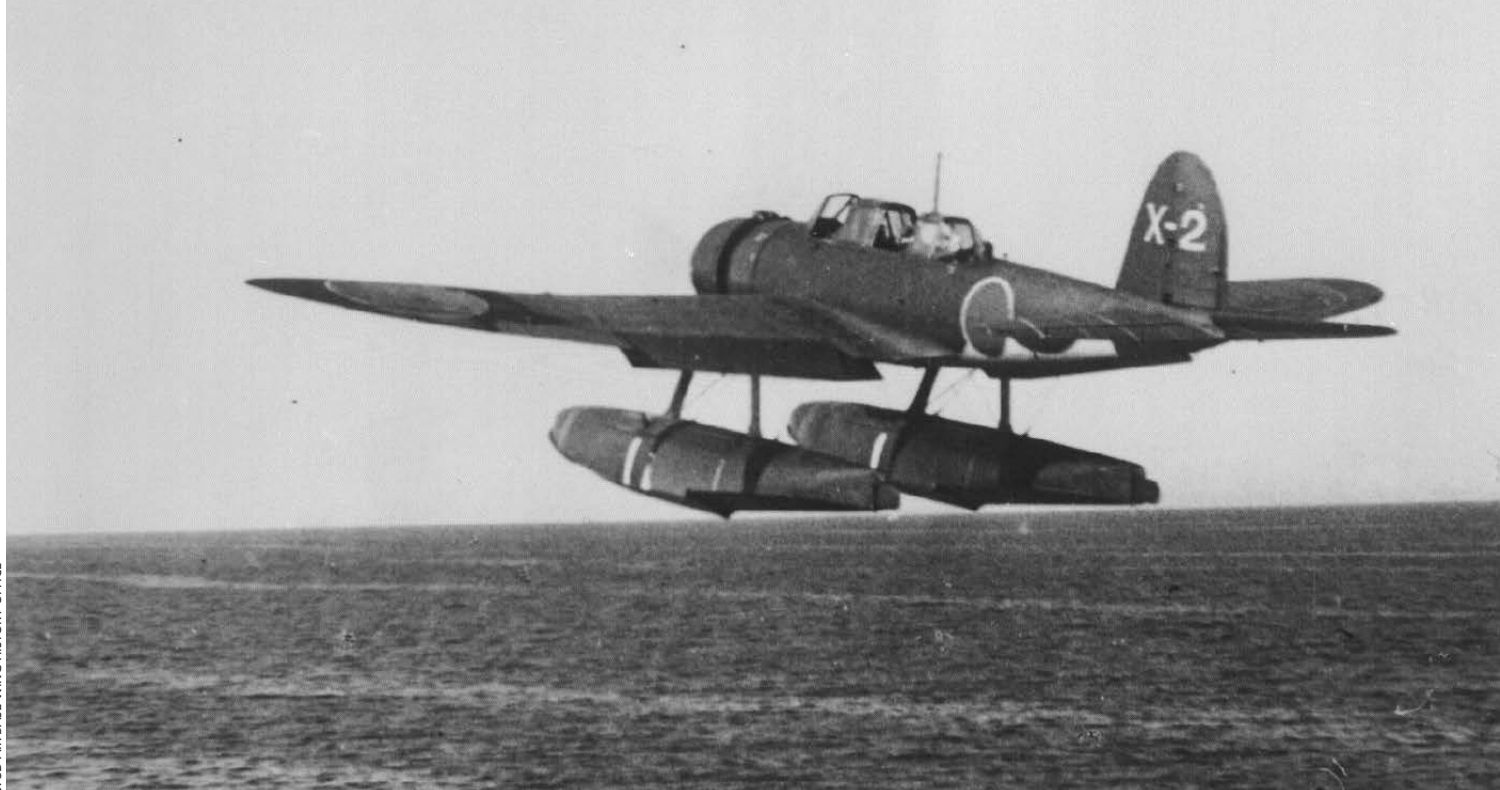
Aichi E13A Jake

Navy Type 0 Reconnaissance Seaplane
(零式水上偵察機)



Model:	E13A
Power:	One Mitsubishi Kinsei 43 fourteen cylinder radial engine rated at 1060 hp
Top Speed:	197 mph
Cruise Speed:	138 mph
Range:	1335 miles
Ceiling:	22,245 feet
Bomb Load:	550 lbs.
Armament:	One flexible mount 7.7 mm Type 92 machine gun in the rear position
Crew:	3 - pilot, observer/navigator, radio operator/gunner

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The E13A served in greater numbers than any other Japanese float plane.

A Long Running Favorite

Wartime activity in the Pacific presented the need to provide carrier-based escorts for the Japanese Naval convoys which often operated far away from any land bases. The float type plane therefore proved to be a good solution and were widely used throughout the theater, specifically the E13A, Allied codename Jake.

The Jake was built in Japan to serve as a long-range reconnaissance float plane fulfilling a 12-Shi Navy specification for a three-seat float plane to replace the aged Kawanishi E7K2. The order was given to three airplane designer companies: Aichi, Nakajima and Kawanishi which competed for the bid. In December of 1940, after extensive service trials, it was Aichi that was awarded the contract and production officially began on the E13A, designated

the Type 0, Model 11 by the Japanese.

The Jake operated from ship or shore bases wherever the Japanese Navy was active. It could operate from heavy cruisers, battleships and seaplane tenders. The underappreciated seaplane often performed its tasks covertly, but it was successful, and very popular with its crews. The E13A proved to be an effective scout for the Imperial Japanese Navy throughout the entire war, and it served in greater numbers than any other Japanese floatplane during the conflict. Operating off the catapult systems of cruisers and battleships, the E13As had a range of over 1,600 miles, which made them ideal for scouting ahead of the surface force.

The aircraft was built by three aircraft manufacturers, with the largest number being produced by Watanabe

The seaplane performed its tasks without much recognition, but it was effective and very popular with its crews.

Tekkoshō KK who built about 1237 of a total 1418 aircraft. However, the model that was probably used in the Aleutians was the E13A1 built by Aichi, of which there were only 133 examples. The aircraft remained in service throughout the war.

Service In the Aleutians

Six Jakes were among the fleet of aircraft delivered to Kiska aboard the *Kimakawa Maru* shortly after occupation of the Island. They were used for search and rescue, occasionally for transport duties, and had a limited attack role.

Often overshadowed by the Rufe's role in the Aleutians, the Jakes, for a short period of time, played an active defensive role. When American fighters and bombers showed up over the island, the Jakes rose up to meet them. At the beginning of October a flight of B-24s escorted by four P-38s and six P-39s, successfully battled the three seated float plane. During that one engagement alone, four were shot down.

A few days earlier, a lone Jake was seen circling above the new airbase on Adak. No chase ensued. The following day the same Jake returned overhead, earning it the nickname "Good Time Charlie." This time it released its bombs, both of which landed harmlessly in the tundra. It was the last time this Jake or any other enemy aircraft were seen over Adak.

October was a rough month for Nobukichi Takashashi's 51st Base Air Unit, over half of the



Aichi E13A Jakes anchored in Kiska Harbor near the Japanese main camp area.

fleet of six E13A1s that just arrived had been destroyed by US forces in aerial combat. During the initial buildup of the airfield on Amchitka Island, just 70 miles southeast of Japanese held Kiska, the Jakes made unopposed bombing runs in a futile attempt to slow progress. Once the fighters arrived, those, for the most part, ended.

The Japanese made efforts to replenish the

Jakes with ten more arriving in February 1943, but within a month, they too were rendered useless—either as a casualty of the weather or as a result of the conflict.

Further Reading

Francillon, Rene J. *Japanese Aircraft of the Pacific War*. London: Putnam and Company, 1979.

IMPERIAL JAPANESE NAVY AIR SERVICE, WOA / TED SPENCER

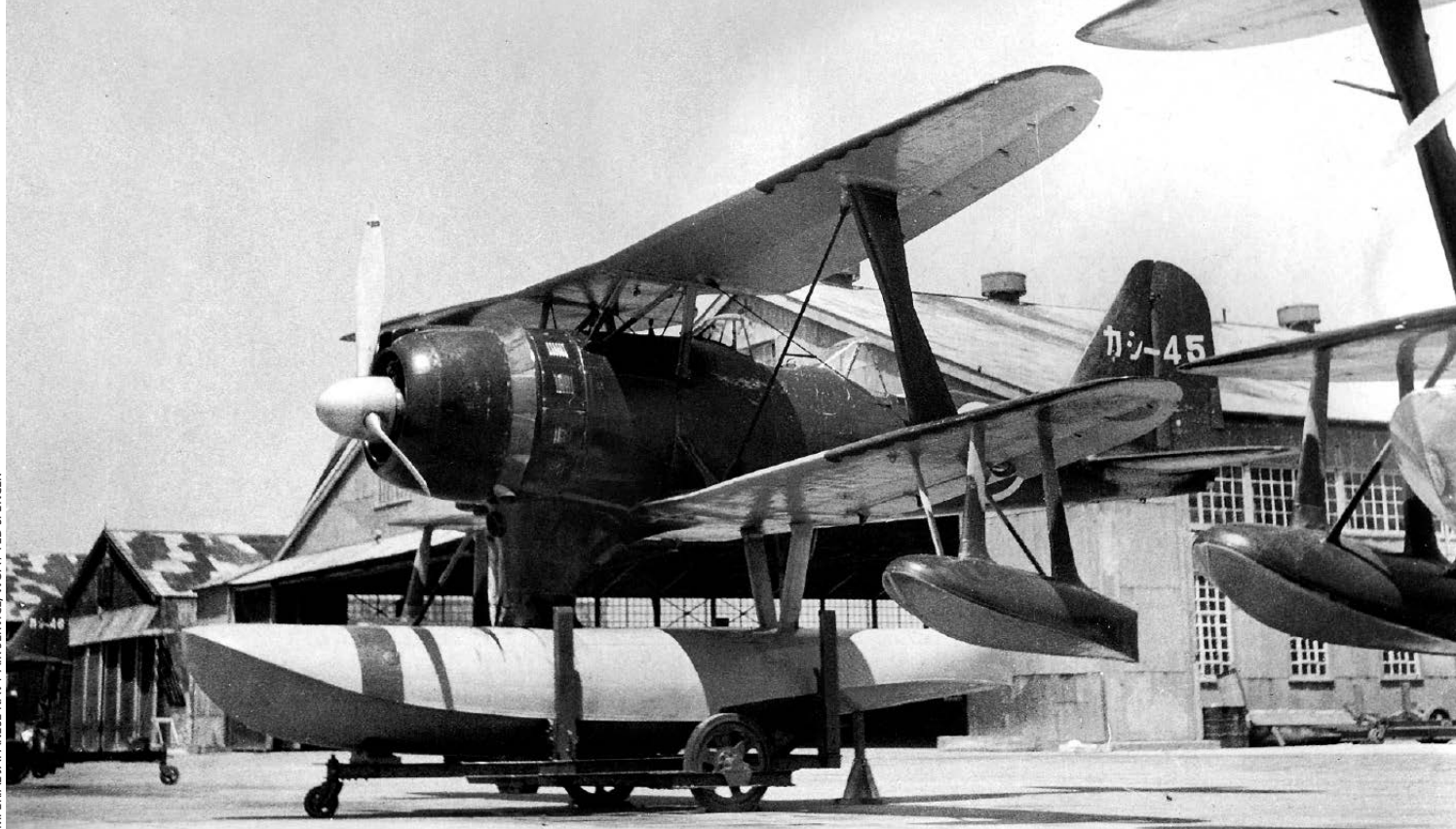
Mitsubishi F1M2 Pete

Navy Type 0 Observation Seaplane
(零式水上観測機)



Model:	F1M2
Power:	One Mitsubishi Zuisai 13 fourteen cylinder radial engine rated at 875 hp
Top Speed:	230 mph
Cruise Speed:	Unknown
Range:	460 miles
Ceiling:	30,970 feet
Bomb Load:	Two 132 lb bombs
Armament:	Three. Two forward-firing 7.7 mm Type 92 machine guns and one flexible machine gun firing aft.
Crew:	2 - pilot, radio operator/gunner

IMPERIAL JAPANESE NAVY AIR SERVICE, WOA / TED SPENCER



The F1M2 Pete was one of the few biplanes still in production during World War II. It was the last biplane type of the Imperial Japanese Navy.

The Last of a Dying Breed

One of the few biplanes still in production during World War II, the Mitsubishi F1M2, known to the Allies by the code name “Pete,” was to surprise a number of Allied airmen in the first year of the Pacific War. Intended as a shipboard reconnaissance plane, it came to serve commendably in a number of other roles including coastal patrol, convoy escort, dive bomber and even interceptor.

In 1934 the Imperial Japanese Navy requested a short-range reconnaissance plane that could be launched by catapult from cruisers and battleships. Unlike the previous models of long-range reconnaissance floatplanes bearing

an “E” designation, the “F” type was meant to be in a class by itself—intended to direct naval gunfire, but also to be capable of protecting its mother ship as a fighter if necessary. Aichi, Kawanishi and Mitsubishi competed to fulfill the new specification, but Kawanishi eventually withdrew.

After evaluating prototypes from both companies, the Navy chose Mitsubishi’s proposal, designed by Joji Hattori, which was designated F1M1. Although it was a biplane, the F1M1s designers paid a good deal of attention to its aerodynamic qualities, and it outperformed its Aichi competitor, the F1A1, especially in speed. The F1M1 prototype, however, suffered from a disturbing amount of

As with other seaplanes on Kiska, severe weather conditions and heavy allied fire took their toll on the Pete.

instability, both in the air and in the water.

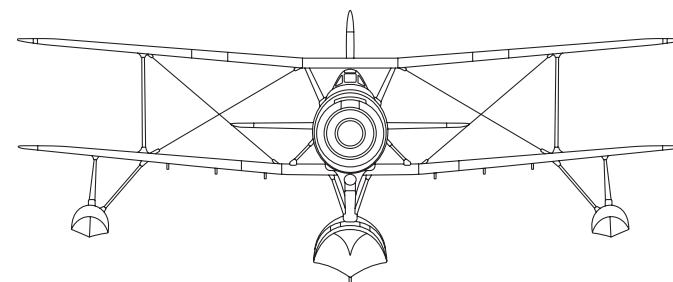
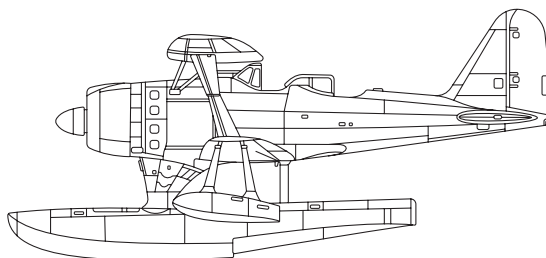
After building three more F1M1s, the Mitsubishi design team decided to redesign the fuselage and enlarge the rudder area, while the wings were given more dihedral and new leading edges. This improved plane was officially called F1M2 Navy Type 0 Observation Seaplane Model 11. It was the standard model throughout the war. Petes were also made by the 21st Naval Arsenal at Sasebo until March 1944. A total of 524 were produced.

The biplane saw considerable service throughout the war beginning in 1941 and gradually equipped most of the larger units of the Japanese navy—eight battleships, nine cruisers and six seaplane-support ships.

Service In the Aleutians

The Petes in Alaska were part of a utility force which consisted of Jakes, Daves and also a squadron of Rufes. They made up the 51st Base Air Unit commanded by Nobukichi Takashashi, while the Rufes made up the 452nd Naval Air Group, a subordinate of the 51st. The floating utility force had been detached from a group of auxiliary vessels following the defeat of the Japanese at Midway. They were sent to aid the northern shore-based operations performing reconnaissance and antisubmarine patrols from Kiska Island.

There were 40 pilots, 20 ground crew and 70 support personnel assigned to operate this unit. Supplies and spare parts were brought ashore. The Japanese constructed a seaplane ramp in addition

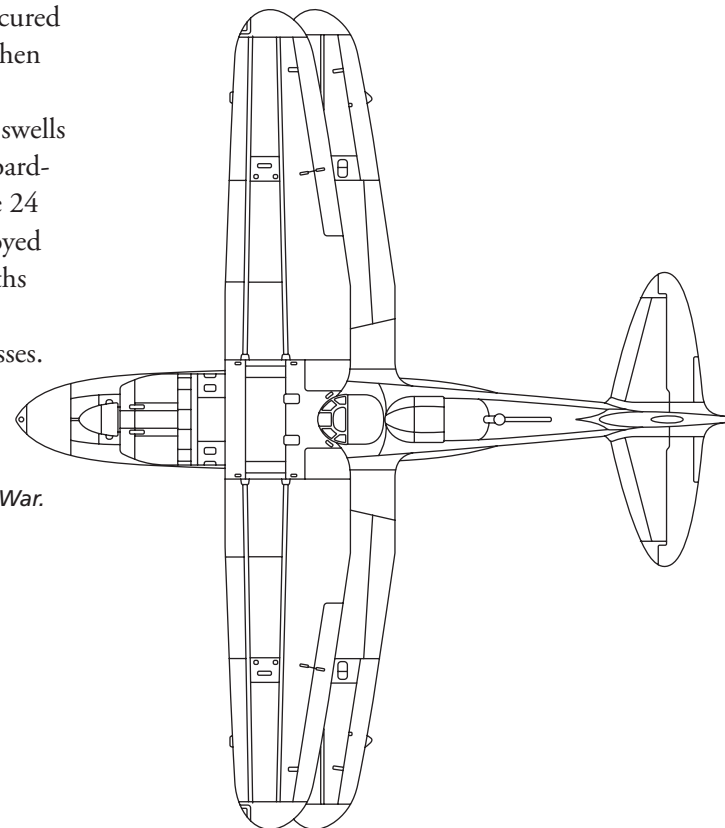


to three hangars at the main camp area and secured a string of mooring buoys for aircraft tie up when weather permitted.

Ultimately the rough waters and pounding swells of Kiska Harbor combined with the US bombardment took their toll on the floatplanes. Of the 24 original utility floatplanes from the 51st deployed to Kiska, only two were operational two months later. Sixty percent were lost in the surf and to weather. The remaining losses were combat losses.

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History of Airfields in Alaska

Beginning in the late 1930s, the Civil Aeronautic Authority (CAA) began developing an improved civil aviation infrastructure strategy throughout Alaska. At the time of the military's arrival in the early months of 1940, only a handful of airfields spread out across the expansive territory had operational runways big enough to handle even a small military aircraft. The challenge was that airfields in defense of Alaska were not high on the list of government priorities during the pre-war years despite the longstanding opinions of some influential and highly regarded military officials.

General Billy Mitchell, Assistant Chief of the

US Army Air Service and later known as the father of the US Air Force, was one of Alaska's biggest air power advocates believing vehemently in its strategic importance and pushed for its air defenses. Mitchell successfully landed his Black Wolf Squadron of D4H DeHavillands in Nome during the summer of 1920, demonstrating that Alaska could in fact, be linked to the rest of the United States by way of air and therefore the airplane could effectively be used a viable means of defending the expansive territory.

General Henry "Hap" Arnold, Chief of Staff, Army Air Forces, reinforced Mitchell's position in

1934, after returning from an arduous scouting mission leading 10 YB-10s from Washington DC to Fairbanks, a round trip of 7,360 miles. Upon his return, he too, acknowledged that airfield development throughout Alaska was necessary.

Even with the support of these reputable generals, it took nearly two decades from the time of Mitchell's first flight to finally get approval to fund Alaska's first land based military airfield: Ladd Field, just outside Fairbanks. All requests for airfield funding were denied by the House appropriations committee until May of 1940 when the tensions in Europe and Asia became strong enough that the

Left: The Aleutian theater would see the first operational use of Marston matting, interlocking pierced steel planks. US forces working around the clock could lay the strips over top of any terrain creating a functional airfield in roughly 10 days. Ideal for the difficult Aleutian tundra.

"Alaska is the most central place in the world for aircraft and that is true either of Europe, Asia, or North America. I believe in the future, he who holds Alaska holds the world, and it is the most important strategic place in the world."

*— General William "Billy" Mitchell,
1935 testimony in front of a Military Affairs Committee.*

“In Alaska must be situated the great flying fields and air terminals which shall eventually bind and serve vast airways connecting industrial centers. Here too must be situated the great air bases equipped to defend these same air frontiers from the sky invasion by any possibly enemy.”

– General Henry “Hap” Arnold

President declared a state of unlimited national emergency, resulting in Congress passing a \$10.5 million defense budget which included construction of the airbase in Anchorage as well as Naval facilities in Kodiak and Dutch Harbor.

A Cooperative Effort

Ultimately, the construction of airfields across Alaska was a combined effort of the Civil Aeronautic Authority (CAA), civilian contractors and the War Department. The CAA, which was already involved in an airfield development project, was responsible for the establishment and improvement of civilian airfields and placement of navigational aids in the territory. At the request of the Army, the agency adapted its building plans to consider

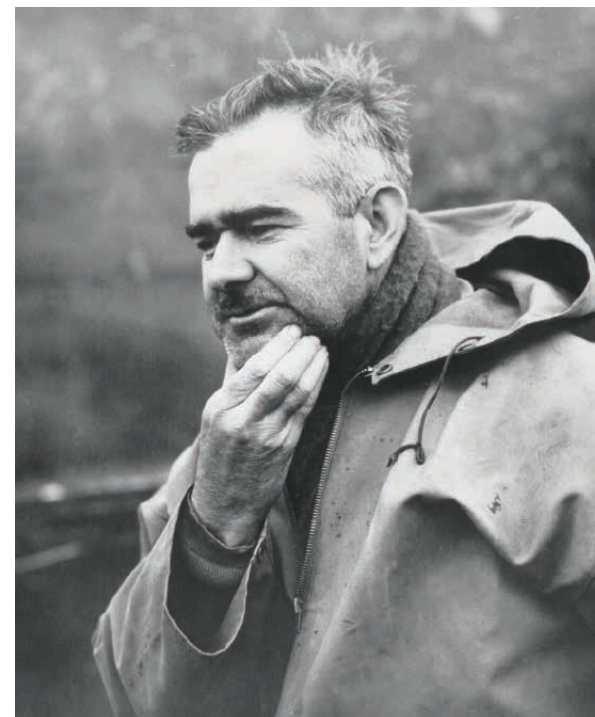
the military’s tactical needs. Subsequently, several of these strips would be used by the military as supporting or intermediate airfields through the war years. The construction of major airstrips and forward bases would be the responsibility of the military. As the threat of war crept closer, the two agencies coordinated their construction efforts to ensure that military needs laid out by Alaska Defense Commander General Simon Bolivar Buckner were being met and met swiftly.

With federal defense funding finally in place and a cooperative effort underway, thus began the rapid buildup of airfields that were created not just to defend the territory but also to become part of Alaska’s permanent and critical infrastructure—forever changing the quiet frontier.

Building the Impossible: Colonel Benjamin Talley

Supervision of this monumental project fell onto the shoulders of then Captain Benjamin Talley, a 14-year Army Corps of Engineers veteran who first arrived in Yakutat, Alaska in October 1939 to head the construction of the coastal route airfield. Having proved himself as a hardworking and determined leader, Talley went on to assume his duties as Resident Engineer in Alaska in charge of all Army construction in the territory, a gargantuan undertaking.

Building air defenses along this part of the world



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Colonel Benjamin B. Talley, “The Father of Military Construction in Alaska.”

was an ambitious task. Enormous amounts of manpower and intense efforts were required due to the broad distances travelled and the logistics of maneuvering supplies and equipment in such a rugged, remote and unpredictably hostile environment. The Aleutian Island chain consists of a long string of subvolcanic islands most of which have peaks rising up to 5,000 feet above sea level.



A P-38 rumbles down a wet and muddy steel planked runway on Adak, 1942.

The islands span the longitudinal distance of 1,100 miles bordered by the tumultuous Bering Sea and icy North Pacific. The meeting of these two geological positions creates unruly weather phenomena, thick fog, strong winds and magnetic anomalies. These factors alone make the exploration of suitable land for the construction of airfields near impossible.

Along with Talley and a cadre of his men, fact-finding duties were first assigned to an advanced scouting party from the 1st Combat Intelligence Platoon known as the Alaskan Scouts, or Castner's Cutthroats after its commander Major Lawrence Castner. The rugged group of men matched the environment they worked in. They were born and raised on the land, and familiar with its unique climate and terrain. Many of them were Alaska Natives. From their findings, the next airfield location was decided and typically within days, construction commenced. Often, offloading took place in the most inhospitable conditions; rough seas, bitter wind and unforgiving terrain. The absolute grit of these trailblazers is remarkable.

After the completion of the airfields on Attu and Shemya Colonel Talley's work in Alaska was done. He was then deployed to Europe where his expertise was used for the invasion of Normandy. His footprints throughout Alaska over the three year period became part of the permanent infrastructure

of the Alaska we know today. Many of the airfields now act as lifelines to the smaller communities that dot the territory, critical to Alaska's economic development and forever changing its accessibility.

Revolutionizing Airfield Construction: Marston Matting

Due to the characteristics of the islands' uneven terrain and the necessity for rapid development, a majority of the runways were constructed using perforated steel planking (PSP), also called Marston matting. The 10 foot by 15 inch long metal strips were a US invention developed to fulfill a need by the Army Air Force to build a hard runway surface in different types of environments and do so in a hurry. These interlocking planks were first tested November 1941 near Marston, North Carolina during the Carolina Maneuvers.

The Aleutians were the first place the mats were used operationally and their invention was quite revolutionary. No other country had anything like it and there is no question that their use helped win the war. Each mat weighed 66 pounds and covered a 12.5 square foot surface. The mats needed very few tools to assemble and allowed for a near instant runway. In just days, a runway 5,000 ft long and 150 ft wide could be laid.

From a pilot's perspective though, Marston

matting was rough on the aircraft and rough on the pilot. The vibration given off was jarring enough to rattle helmets clear off. Quite often, the matting would heave or sag, causing some interesting landings and take off maneuvers. Fighter pilots who shared the strip with the much heavier bombers found themselves unintentionally airborne due to dips in the steel strip caused by the difference in weight. This led to separate bomber/fighter strips on most islands.



ALASKA MILITARY HISTORY ASSOCIATION

Although not gentlest on the aircraft or its pilot, the ease of construction could not be beat. P-40s on alert atop the steel planked runway somewhere in the Aleutians.

“We were using the pierced steel planed runway and they had some B-24 Bombers out there. They are heavy, and they got that nose wheel and the two side wheels. So they put three creases, almost like valleys, in the runways. Then when we’d take off in the P-40 and the dips in the runway would throw us in the air but the airplanes were not ready to fly yet so we’d drop back down. We’d go through that several times until we had enough speed to take off.”

– Lt. Col. (RET) Bob Brocklehurst, 344th Fighter Squadron

Major Army Airfields

Ladd Army Airfield Fort Wainwright Fairbanks, Alaska

Operational: September 4, 1940

Constructed by: US Army Air Corps, 151st
Combat Engineers

Configuration: E/W 5,000 feet concrete, later
expanded to 9,000 feet

Still in Use: Military use

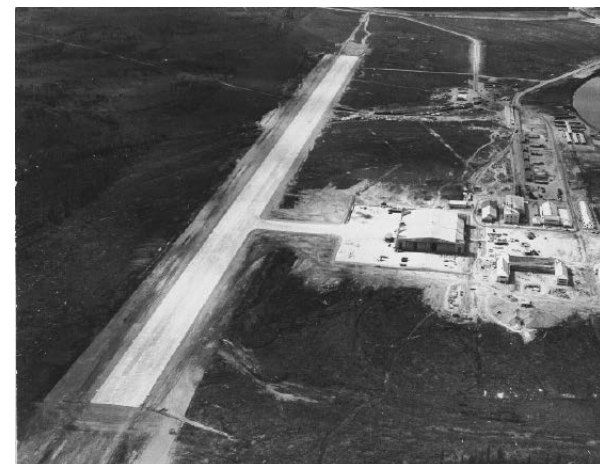
Air Units: Air Transport Command

The push for construction of an airfield in the Aleutians began in the mid-30s. In the spring of 1939, Congress finally approved four million dollars in funding for the construction of a cold weather testing facility near Fairbanks. It was not technically an air base, but it was a start. The 5,000-foot reinforced concrete runway was declared operational in September 1940 with the landing of its first aircraft, a Douglas O-38F, 33-324, an observation aircraft flown by the new base Commander, Major Dale Gaffney. The new northern airfield was named after Major Arthur K. Ladd, a pilot in the Army Air Corps who died in a plane crash near Dale, South Carolina on December 13, 1935.

The two B-17Bs stationed at the airfield participated in various cold weather experiments until the bombers were called into active service immediately following the bombing of Dutch Harbor. Subsequently, Ladd Field became home to Air Transport

Command supplying the Alaska Theater with aircraft and also acted as the northern end of the Alaska-Siberia route facilitating the transfer of nearly 8,000 Lend-Lease aircraft to the Soviet Union for use in the European Theater.

After the war, it became an important Cold War Base with air defense reconnaissance and continued serving as an Arctic Research Station until 1961 when all air operations were transferred to the Eielson Air Force base roughly 22 miles southeast. The Army took over Ladd Field, renaming it Fort Wainwright where it remains an active participant in the defense of the Arctic. In 1985 Ladd Field was designated a National Historic Landmark.



Ladd Field, 1941.



The men of the 807th Aviation Engineering Battalion played a significant role in the building of airfields through the Aleutians.

"In the end, the war in the Aleutians, one could say that the war was won at the front end of a bulldozer, and by the determination of engineers military and civilian."

– Lt. Col (RET) John Cloe,
Eleventh Air Force
Historian

Elmendorf Army Airfield Anchorage, Alaska

Operational: September 12, 1940

Constructed by: Bechtel-McCone-Parson (June 40-Jan 41) and Army Quartermaster Corps, Army Corps of Engineers (Jan 1941)

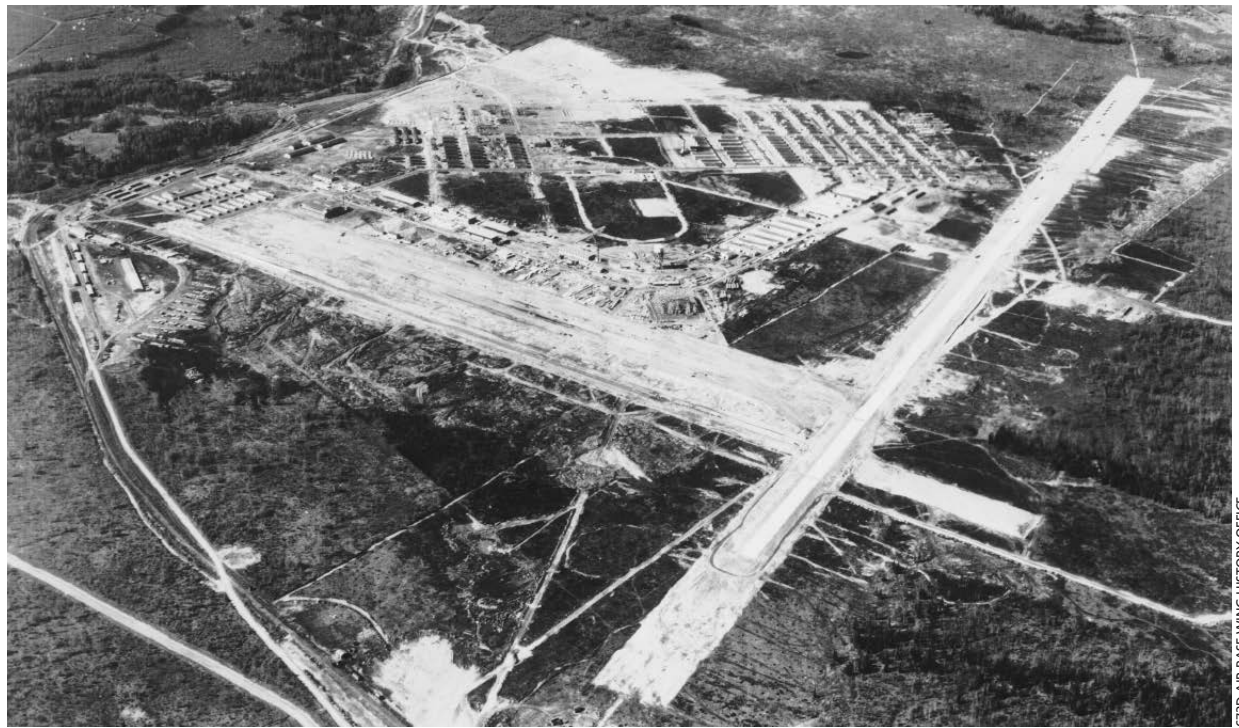
Configuration: N/S 5,000 feet, E/W 7,500 feet, concrete, later expanded to 10,000 feet.

Still in Use: Military use

Air Units: 36th, 73rd, 77th, 406th, 8 RCAF (Bomber); 18th, 42nd, 57th, 54th, 111 RCAF (Fighter); 42nd and 54th (Troop Carrier)

In the spring of 1939, nearly 45 thousand acres of land adjacent to Anchorage were put aside for the construction of a new airbase. A 10.5 million dollar defense budget, passed by the Senate in May, included the initial construction phase of the base, as well as Navy facilities on Kodiak Island and Dutch Harbor.

The Army's Constructing Quartermaster, Major Colonel E.M. George arrived from Ladd Field to oversee initial base construction beginning June 7th, 1940. Along with the Army men, a local crew was put to work clearing land until the workload exceeded the local supply of laborers and reinforcements had to be brought into the territory. By August, command of the base was handed over to then Major Everett Davis who had just arrived. By November 1940 the field was serviceable enough to



Elmendorf Airfield, May 5, 1941.

welcome the first plane, a Douglas OA-5 Pelican. General Talley and the Army Corps of Engineers arrived at the start of 1941 to take over the completion of the runways and what was left of base construction. The Anchorage based airfield served as the Headquarters for all air operations in the Aleutians and was home to the Alaska Air Depot responsible for servicing all aircraft flying in the Alaska Theater.

The base was officially named Elmendorf Field after Captain Hugh M. Elmendorf, an up-and-coming Air Corps Officer who had been killed January 13th, 1933 while on a pursuit test flight near Wright Field. In 2005, Elmendorf Air Force Base merged with Fort Richardson becoming Joint Base Elmendorf Richardson (JBER,) the largest

military base in Alaska.

Elmendorf Air Force Base, as part of JBER, remains operational today and still hosts 11th Air Force Headquarters along with Alaskan Command (ALCOM). The joint base is also home to the Alaska NORAD (North American Aerospace Defense Command) Region. NORAD is a bi-national United States and Canadian organization, charged with the mission of aerospace warning and control and maritime warning for North America. This continues the tradition of cooperative military efforts begun in World War II, and enshrined in the 1957 NORAD agreement committing both nations to maintain the air sovereignty and air defense of the airspace of Canada and the United States.

Thornborough Army Airfield Fort Randall Cold Bay

Operational: March 1942

Constructed by: Morrison- Knudson
(Sept 41-Feb 42)
151st Engineer Combat
Regiment.

Configuration: N/S 5,000 feet & E/W
5,000 feet, post war
expansion to 10,000 feet,
concrete

Still in Use: Commercial and general
aviation use

Air Units: 73rd, 36th (Bomber), 11th,
18th, 54th (Fighter,) VP 41,42
(Navy)

Cold Bay lies on the west end of the Alaska Peninsula, 200 miles northeast of Dutch Harbor and roughly the same distance southwest of Kodiak Island. The construction of the airfield initially fell under the responsibility of the Civil Aviation Administration and a construction team from Morrison-Knudson who arrived to the windswept and bleak landscape of Cold Bay in September 1941.

Not long after the outbreak of the war though, Major Talley's engineers took over from the civilian company, as part of an overall effort to transition the building of the airfields to the army. Men of the 151st Engineer Combat Regiment worked around the clock to complete the full length of the field by April. As part of the Air Striking Group (Task Group 8.3) two fighter squadrons (P-40) and one bomber squadron (B-26) were sent forward in



Thornborough Field, Cold Bay.

defense of the Aleutians. At the time of the attack on Dutch Harbor, P-40s from both the 18th and 11th as well as B-26s from the 77th were launched to meet the aggressors. The quick development of forward bases to the west meant Cold Bay would act mainly as a support base until 1945. Because of its long runway and position along the Great Circle Route, it remained active for militarily and civilian use through the Vietnam War when control was transferred to civilian authorities.

The field was named after Captain George

Thornborough, 73rd Bomber Squadron. On June 4th, after returning from a failed and experimental torpedo mission against the Japanese carrier, Ryujo, Captain Thornborough set out again determined to hit the Japanese fleet. His B-26 made it back to the field only to find it shrouded in fog. With radio silence and no other airfields around, efforts to assist him failed. He and his crew were never seen again. For his valor, he was awarded the Distinguished Flying Cross and the airfield was named in his honor.

Fort Glenn (Cape Field) Army Air Field, Naval Air Facility Umnak

Operational: April 1, 1942

Constructed by: 807th Engineer Aviation Company and Seabees

Configuration: NW/SW 5,000 feet (later expanded to 8,300,) N/S 5,000 feet, E/W 5,000 feet (Marston Matting), NE/SW 5,000 feet (compressed volcanic ash)

Still in Use: Not maintained

Air Units: 21st, 36th, 77th, 404th (Bombers) 11th, 18th, 344th, 54th (Fighters) 14 & 111 (Fighters, RCAF), VP-41, 61, VS-49, VB-136 (Navy)

Located 70 miles southwest of Dutch Harbor on the northeastern side of Umnak Island, Cape Field at Otter Point was the first airfield to be built along the Aleutian Chain. After many surveys of the surrounding areas, and much insistence to gain its approval, construction began during the early months of 1942. Battling rough waters and intense winter winds that blew incessantly through the treeless tundra made work torturous for General Talley's 807th Engineering Aviation Company who had just come from the Yakutat airfield build.

To add to the difficulties, there was no natural harbor at Otter Point. The Army engineers first had to unload their cargo ships docked at Chernofski Bay on Unalaska Island 12 miles away, then reload the supplies onto makeshift barges consisting of one



Cape Field on the Northeast side of Umnak Island. Ship rock, a notable landmark in the distance.

small tugboat and several open fish scows for the trip across the notoriously rough Umnak Pass to Otter Point. From there they unloaded the supplies in the raging surf dragging them up the sandy shoreline onto the tundra and over to the construction site. The effort needed was immense.

The strip on Umnak became the first operational airfield of the war to be made with Marston matting; interlocking perforated steel planks. Even with all extra laborious steps involved in getting the construction materials, within two weeks they had completed a N/S 5,000 ft x 100 ft runway. It was declared operational with the landing of a C-47 with General Buckner and the now Colonel Talley on board. Two other crosswind runways were later built using compressed volcanic ash native to the island, which the pilots actually preferred. The matting turned out to be hard on aircraft and their pilots.

The addition of this advanced airfield still fell well short of fighter range for missions over the enemy target of Kiska, over 1,000 round trip miles away.

Subsequently, within six months, Cape Field became primarily a staging base as Adak, roughly 250 miles southwest, became the new forward base.

The airfield on Umnak was named in honor of Lieutenant John J. Cape Jr. who successfully downed one Japanese Zero June 4, 1942 during a dogfight as enemy aircraft were returning to their carriers after their air attack at Dutch Harbor. Almost simultaneously, he too was shot down crashing into the frigid waters off of Umnak without a trace.

The airfield remained open for a few years after the war as a refueling stop for military aircraft flying the Great Circle Route extending the NE/SW runway to 8,300 ft to accommodate the bigger planes. In 1946, all military personnel were removed and it went into caretaker status until 1950 when it was decommissioned. For the last several decades, a large herd of cattle have made the abandoned airfield and surrounding structures their home.

Fort Glenn was designated a National Historic Landmark in 1987.

Davis Army Airfield

Naval Operating Base Adak

Adak Island

Operational: September 12, 1942

Constructed by: 807th Engineer Aviation Battalion, Guy F. Atkinson, West Construction Co., Puget Sound, Birch and Sons (expansion)

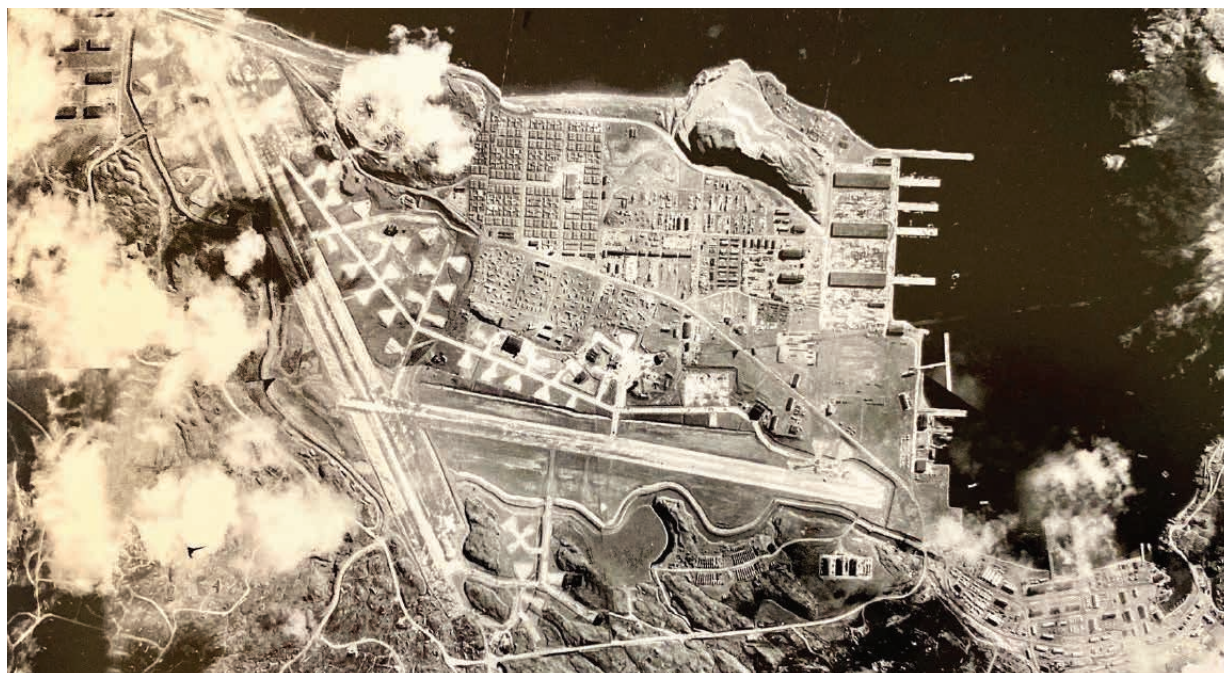
Configuration: N/S 5,800 feet, E/W 7,800 feet, Marston matting, later concrete (1943)

Still in Use: Commercially

Air Units: 21st, 36th, 73rd, 77th, 404th 406th (Bombers) 11th, 18th, 42nd, 54th, 56th, 57th (Fighters) 111 (RCAF)

Under the escort of American and Canadian naval vessels, Brigadier General Eugene Landrom's occupation force along with Lt. Colonel Whitesel and his 807th Engineering Battalion, began off loading supplies along the beaches of Kuluk Bay for the construction of an airfield on the north east side of Adak Island located within 250 air miles east of Kiska.

Like Cape Field on Umnak, the landing force was greeted with rough seas, desolate land, and wicked wind. Unlike Cape Field though, Adak was mostly mountainous and had little flat land. As a result, the Army engineers had to convert a tidal lagoon being fed from Sweeper Creek into some type of workable area for which to construct a runway. They installed a drainage ditch and



Davis Army Airfield on Adak, circa 1943.

dike along the west side which helped divert the water and a tidal gate helped prevent flooding. Bulldozers and other heavy equipment filled in the swampy area enough to create a base for the Marston matting. Working tirelessly day and night, the 807th along with the infantrymen completed the N/S 5000ft fighter strip September 12th, just 12 days after stepping foot on what seemed impossible ground. By October, they had completed the intersecting bomber strip. Both runways were eventually paved.

The new air field, code named Longview by the Army Air Force and Fireplace by the Royal Canadian Air Force, was officially named Davis Army Air Field to honor Colonel Everett Davis, who essentially formed and later briefly commanded the

Eleventh Air Force. Davis was killed in November of 1942 when he was involved in a plane crash along with seven others when a C-47 traveling from Naknek to Anchorage flew into the mountainside. There were no survivors.

Adak went on to become the largest air base in the Aleutians and serve as the joint operations center through the campaign. At the end of the war, the Army Air Force turned the base over to the Navy who established an anti-submarine warfare base, Naval Air Facility Adak. It remained operational though both the Korean and Cold Wars and into the 1990s, finally closing in 1997 after 55 years of continual service defending the Aleutian area.

Davis Army Airfield was designated a National Historic Landmark in 1986.

"I was at Umnak and we got orders to move the outfit to Shemya but to take and put in airplanes at Attu but that its ramp holds only six airplanes. Pierced steel plank runway; it was a real short runway, at one end was 50 feet high above the water with a bunch of rocks and the other end was a 30 big pit, I don't remember, maybe an acre or more, about 30 feet deep, where they had to dig out the soft muskeg, there was not any bottom in there. So the runway was pretty short. They asked if we could do it and I said, 'Yep, we can do it.' Six guys. I picked up 8 guys, the best in the squadron. Two of them rode the C-47 in. We flew 12 airplanes from Umnak to Atka for refueling. Then to Adak, this was our staging and is where we staged with six airplanes and the two pilots on the C-47 that flew out there. They did not want the Kiska people to know that we were doing that..."

I had overcast, and the C-47 climbed up through it and there was a hole on the south side of the mountain at Adak. I took my six airplanes up through that. We climbed up and got up beside the C-47 and he started out on a Northwest heading way out, bypassing Amchitka and Kiska by a wide angle so they wouldn't know we were going out there. Well, pretty soon we start thinking 'Well hey, we are not gong to have enough gas to go back and everything is overcast.' Well what the heck and we kept going. I finally turned almost North of Attu and everything was solid overcast. There was a big hole in the south side of the mountain, enough for us to get down and land. A big clear blue sky hole. Everybody landed safely. A couple had to brake real sharp and come within an airplanes length of the end of the runway, but they did it. We kept six airplanes there. The rest of the squadron into Shemya just east of there. This was June of 43."

— Lt. Col. (RET) Bob Brocklehurst.
NPS oral history



Taking the first flight of P-40s into Attu as the commander of the 344th Fighter Squadron.

Fox Runway Amchitka Army Airfield Naval Air Facility Amchitka Amchitka Island

Operational: February 16, 1943

Constructed by: 813th Engineer Aviation Battalion, 151st Engineer Regiment, Seabees

Configuration: NE/SW 4,000 feet, E/W 10,000 feet, N/S 6,000 feet, Marston matting

Still in Use: No. Access is prohibited.

Air Units: 21st, 36th, 73rd, 77th, 404th, 406th (Bomber) 11th, 14 (RCAF), 18th, 54th, 344th (Fighter) VP-61, 62, (Navy) VB-135, 136, VS-49

Not long after the runways on Adak were completed, Colonel Talley led a small reconnaissance party ashore at Amchitka on October 22, 1942. Based on his recommendation, approval was finally given to move forward with the construction of an airfield that put the Americans within striking distance of the Japanese occupied Kiska Island.

On January 12, 1943, under the protection of the small cruiser fleet—the Indianapolis, the Raleigh and the Detroit—the 813th Engineer Aviation Battalion went ashore amidst a winter storm. They battled large rolling seas which complicated the landing operations, sinking boats, and near capsizing others. Nonetheless, the engineers and their men persevered as they did time and time again and began to carve out a 4000 ft fighter strip



Fox Runway, Amchitka Island, 1943.

at the head of Constantine Harbor. As with Adak, the most suitable place for the runway was in the middle of a tidal marsh. They dammed, drained and filled it in order to make enough usable flat land on which to land an aircraft.

Within a few weeks, the Japanese had discovered the activity on Amchitka and began a very limited air offensive, dropping bombs on the runway and strafing the ships in the harbor. At least three people were killed and several wounded, but there was very little other damage. Progress continued and on February 16, Lieutenant Kenneth Saxhaug and his P-40 from the 18th Fighter Squadron touched down on the new runway, now called Fox Runway.

The 151st Engineer Regiment was also carving out the beginnings of a ten thousand foot bomber strip on a flat area overlooking the harbor. Work was completed by March. The strip's close proximity to enemy targets proved to be a game changer in the final push to regain the territory.

After the war, Fox Airfield was renamed Amchitka Air Force Base and reassigned to the Strategic Air Command, where it served as a refueling and weather station and also assisted in rescue and recovery missions until it closed permanently in 1949. Later, the Atomic Energy Commission used the remote island for a series of underground nuclear tests that lasted until 1973 when it was abandoned.

Alexai Point Army Airfield Attu Island

Operational: June 7, 1943

Constructed by: 807th Engineer Aviation Battalion

Configuration: E/W 3,000 feet, N/S 5,000 feet, Marston matting

Still in Use: No

Units: 77th (Bomber) 18th, 54th, 344th (Fighters)



BRUNO KOZLOWSKI COLLECTION



USAAF PHOTO

673D AIR BASE WING HISTORY OFFICE

Alexai Point runway on the east side of Attu Island.

Alexai Point situated just east of entrance Massacre Bay was a narrow strip of land just big enough and flat enough to lay a 3000 foot runway, but just barely. Before the fighting ended on Attu, Colonel Talley had already selected the peninsula as the best piece of land for the construction of the next airfield.

June 8, 1943, one week and one day after they began construction, the runway on Alexai Point

was declared operational marked by the landing of a C-47 who had the important task of evacuating the wounded from the Battle of Attu, now in the final stages. Shortly after, Commanding Officer, Major Robert L. Brocklehurst led Attu's first flight of six P-40s from the 344th, onto the newly laid strip, landing through a lone hole in the clouds with barely a drop of fuel to spare. They, along with the 54th squadron of P-38s, now provided the air

defenses for Attu.

Located just 750 miles from the nearest Japanese installation in the Kurils Islands, the airfield at Alexai Point along with the one on Shemya, became the forward airbases for operations over the islands of northern Japan until the war ended. The base was closed in 1946 and has not been occupied since.

Alexai Point Airfield was designated a National Historic Landmark in 1985.

Shemya Army Airfield Shemya Island

Operational: June 21, 1943

Constructed by: 807th Engineering Aviation Battalion, S. Burch & Company and Morrison-Knudsen Inc., Central Building

Configuration: E/W 10,000 feet, N/S(B) 5,000 feet, NE/SW 5,000 feet, Marston matting and later paved

Still in Use: Military

Air Units: 21st, 36th, 404th (Bomber)
11th, 18th, 54th, 344th

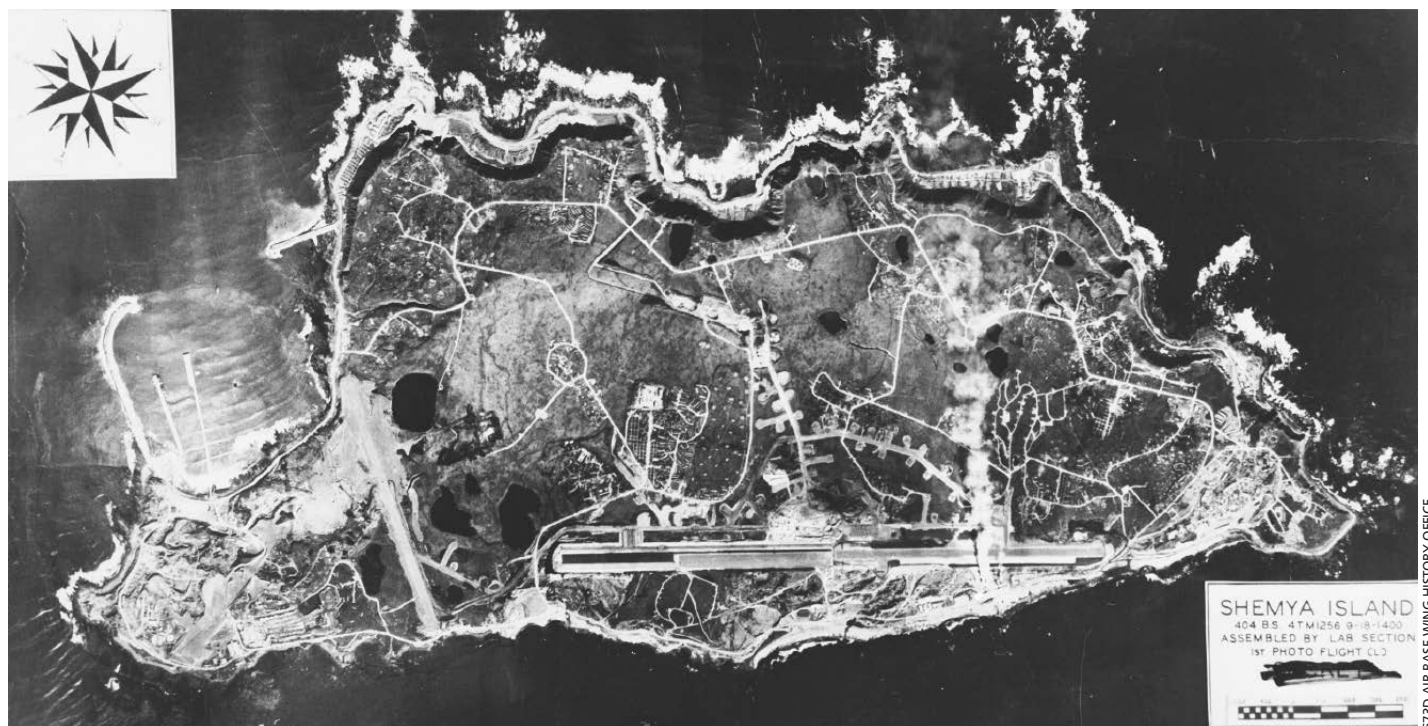
After establishing Alexai Point on Attu, Colonel Talley went in search of a suitable area for which to erect the last of the Aleutian Army Airfields. On the heels of the Alaskan Scouts, he led his party of eighteen onto the shores of Shemya Island on May 28, 1943. What he finally found was flat land, a rarity and a welcome sight. Within days, the 807th Engineering Aviation Battalion got to work on the construction of a planned 10,000 foot airstrip on the western end of the island.

By June 22, enough of it was completed to accommodate a C-53 which touched down to officially begin the build up of forces on this small Aleutian Island located just east of Attu. In 1944, approval was given for a civilian contractor

to complete the paved airstrip using bituminous construction material and equipped with a fog dispersal unit. The runway was specifically designed around the wheel loading of a B-29 Superfortress; the aircraft originally intended for the island but never arrived. Instead, B-24s from the 21st and 404th Bombardment squadrons utilized the grand strip to conduct missions over the Japanese Kuril Islands until the end of the war. Additionally, two crosswind runways were also built nearby for the fighters who arrived in July. P-40s from the 344th and P-38s from the 54th called Shemya home until August 1946.

Shemya has remained in use over the years in both military and civilian contractor roles. It was an active Air Force Station until 1994 serving to support strategic intelligence gathering and as a refueling stop along the Great Circle Route. It is still owned and operated by the United States Air Force and acts as an early-warning radar installation with facilities to house support and contractor personnel.

In 1994, the air station was renamed Eareckson Air Station to honor the dynamic leader Colonel William O. Eareckson who had been head of Bomber Command in Alaska during the WWII's Aleutian campaign.



Shemya Army Airfield, 1944.

Major Naval Airfields

Naval Operating Base Sitka

Operational: October 1, 1939
Constructed by: Civil Engineer Corps,
Contractors and Seabees
(Nov 1942)
Configuration: 1,500 feet concrete
Still in Use: No
Air Units: VP-41 & 42, VS-70

Construction of a seaplane base (1937) and later, a full Naval Air Station (1943) on Sitka's Japonski Island officially began the development of strategic airfields construction effort throughout Alaska. At the time of the attack on Pearl Harbor Naval Air Station Sitka was the only established military base in Alaska.

Although not an airfield per se, the air station and seaplane facilities had a large parking area and a 1,500 ft landline runway near to the seaplane ramps, of which there were three. Similar to Dutch Harbor, the short strips were built with an arresting gear added to facilitate a short field landing of Naval carrier aircraft.

As the Navy built other air stations farther west, Sitka became an intermediate field but continued to operate regular patrols of the Gulf of Alaska and southeast Alaska against enemy submarines and possible attacks on the mainland. The base closed in 1944 and is now part of the National Register of Historic Places.



1943 Easter service at Naval Air Station Sitka. The two aircraft are PBY5A Catalina flying boats.

SITKA HISTORICAL SOCIETY

Naval Air Station Kodiak Kodiak Island

Operational: June 1941

Constructed by: Siems Spokane Company-Johnson, Drake & Piper Inc and 4th Naval Construction Regiment (1943 Seabees)

Configuration: N/S 5,000 feet, NW/SE 5,400 feet, E/W 7,500 feet, concrete

Still in Use: Military and commercial

Air Units: VP-41 & 42, VS-70

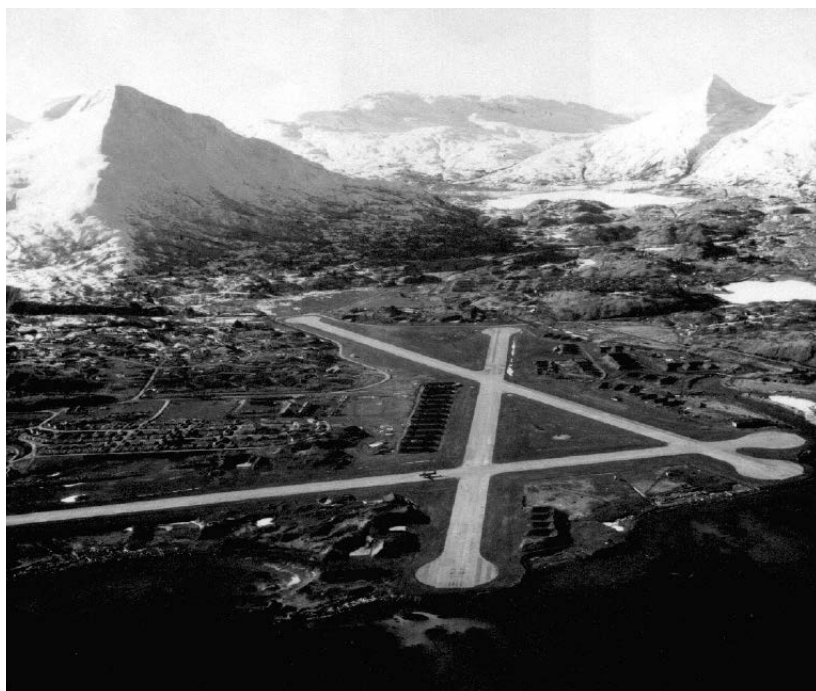
Approved in the late 1930s, the eastern part of Kodiak Island was identified as a suitable location to develop a Naval Air Station and Operating Base. The large island sat at the western border of the Gulf of Alaska in the North Pacific just off the Alaska Peninsula and 250 air miles from Anchorage. Similarly to other islands, it had good deep water harbors but less than ideal grounds from which to construct an airfield; surrounded by mountains on three sides and water on the fourth.

As part of the CAA airfield construction project, the Navy contractors, Siems-Drake Puget Sound, began construction of the airstrip, declaring it operational by the spring of 1941. Later that year, another runway was added for use by the Army to

accommodate its bombers, and finally the addition of a third airstrip completed the project.

In the early days, NAS Kodiak acted as the principle joint operations center. From this advanced base they coordinated their defensive strategies to gain control of Japanese forces. In the spring of 1943, Command moved to Adak but the airfield remained active throughout the war, home to fighters and bombers who were patrolling the waters of the North Pacific until the campaign ended.

The Navy stayed on Kodiak until 1972 when the base changed hands. The Air Station was commissioned as a United States Coast Guard Air Detachment and eventually Coast Guard Air Station Kodiak, the largest USCG base in the Pacific.



KODIAK MILITARY HISTORY MUSEUM, KODIAK.ORG, DAN JESSUP PHOTO COLLECTION

Naval Air Station Kodiak shared its airfield with the Army Air Force. Kodiak's mountainous terrain made the approach challenging.



RCAF HISTORY AND HERITAGE OFFICE

Kittyhawks line the airfield at Kodiak Island, 1943. Note: the Kittyhawk with the letter "T" currently hangs in the entrance to the Smithsonian's Udvar-Hazy Center.

Naval Air Station Dutch Harbor Amaknak Island, Unalaska

Operational: September 1942

Constructed by: Siems Drake Puget Sound and the 4th Naval Construction Battalion (July 1942)

Configuration: N/W-S/E, 4,100 feet, concrete. Post war expansion to 4,500 feet

Still in Use: Commercial

Air Units: VP-41, 42, 43, 48, 61 VS-49

Although a permanent naval presence in Dutch Harbor dates back to 1912 when Navy personnel arrived to man several radio stations in the area, major construction of the Naval Operating Base did not officially begin until 1940. The original plans utilized the surrounding waters as a seaplane base due to difficulty finding level and an extended stretch of terrain that would accommodate land-based aircraft.

In 1941, with necessity overriding the topographical challenges, the civilian contractor Siems Drake Puget Sound and later the Seabees, began work carving out a short gravel airstrip. Eventually, the western slope of Ballyhoo Mountain was cut off and leveled to make room. Additionally, to better accommodate land-based Navy aircraft, they created a short landing field platform equipped with a catapult and arresting gear, similar to that of a carrier, from which they could operate Wildcat



NARA, COURTESY OF JEFF DICKRELL

Naval airfield at Air Station Dutch Harbor, 1942

fighters. Both the airstrip and the platform were incomplete at the time of the 1942 attack. As fast as it was created, the platform was quickly found ineffective and unnecessary. The same modification was attempted early on in Sitka and Kodiak where its usage was also short-lived. The permanent airfield was declared operational in September of 1942.

As bases were developed further west, NAS

Dutch Harbor served more as a logistical support base for both Army and Navy operations throughout the campaign. Naval Operating Base and Fort Mears were abandoned in 1945. Today, the short airfield remains an active commercial runway requiring a special pilot rating for use, one that only a handful of commercial pilots carry.

Amaknak Island was designated a National Historic Landmark in 1985.

Mitchell Field

Naval Air Station Adak

Operational: May 1943
Constructed by: 32nd Naval Construction Battalion, Seabees
Configuration: NE/SW 5,000 feet, NW/SE 7,000 feet, Marston matting
Still in Use: No
Air Units: VP-43, 62, VS-49, 56, VB 136, 131, 139 (Navy)

Initially, the Navy on Adak conducted air operations out the south end of Davis Army Airfield. By May 1943, they moved their fleet to a newly constructed Naval Air Station and seaplane base located ten miles northwest near Clam Lagoon. Within months, plans were already set in motion for an expansion of the base including the creation of two runways that extended from Clam Lagoon to Lake Andrew.

Mitchell Field was named after pilot First Lieutenant Albert E. Mitchell, who was flying the mail route from Cold Bay to Dutch Harbor on June 4, 1942 when the PBV he was flying was attacked by Japanese en route to bomb Dutch Harbor. There were no survivors.

Catalinas, Kingfishers and PV-1s all used the runways here until the base was decommissioned in January 1950 when the Army left the island. At that time air operations were moved back to their original building at the main Army airfield, which was re-commissioned a Naval Air Field Adak and later Naval Air Station Adak. It remained an active Naval airfield through the Korean and Cold Wars conducting anti-submarine patrols until 1997 when the Navy left.



Naval airfield, Mitchell Field was situated between Clam Lagoon and Andrew Lake and roughly 10 miles northeast of Davis Army Airfield.

"The dedication, determination and cooperative effort of engineers, military and civilians cooperating to build these remote airstrips on land that seemed impossible, under conditions equally unimaginable is a feat that overwhelmingly contributed to winning the war in the Aleutians."

– Lt. Col (RET) John Cloe, Eleventh Air Force Historian

Casco Field Naval Air Station Attu Attu Island

Operational: October 1, 1943

Constructed by: Seabees, 22nd Naval Construction Battalion.

Configuration: N/S 6,000 feet, E/W 6,000 feet, Marsten matting

Still in Use: Emergency use only

Air Units: 77th (Bomber), VP-61, 43,45, VS-56, 62, VB-131,135,136,139 (Navy)

The last Naval runway to be built along this remote island chain was on Attu Island. It's situated just 5 miles west across Massacre Bay from the Army Air Field at Alexai Point. Construction began at the beginning of July 1943 with arrival of the 22nd Naval Construction Battalion and the almighty Seabees who were tasked with building a bomber strip long enough to handle the new naval bombers assigned to the station. The Marston matting strip was set down from the mouth of Casco Cove and ran right down the middle of a box canyon often causing pilots to make a rather tense but memorable go-around maneuver if the landing was not executed perfectly. By July 27, the first section of the east/west strip was ready to be tested, although not fully functional until October.

With the completion of this airfield, the Navy's Patrol Wing Four fleet began converting from sea to land based operations utilizing the new PV-1 Venturas and PV-2 Harpoons in place of their old, faithful, and proven PBY-5As. Eventually, a



Naval Airfield, Casco Field on Attu Island, 1946

6000 ft crosswind runway was built and both were used for operations against the Japanese installations at Paramushiro in the Northern Kuril Islands, over 700 miles west, until the war's end.

The Navy airfield was named Casco Field after the longstanding seaplane tender that had dependably served throughout the entire Aleutian Campaign.

In 1946, the Navy left the island and put the Naval Facility on maintenance status but the airfield continued to be used, and later paved for use by the US Coast Guard who operated a Long Range Navigation (LORAN), station that was later designated LORAN Station Attu. It closed August 27, 2010. The runway remains available for emergencies.

Japanese Airfields

Holtz Bay Airfield

Operational: 1943

Constructed by: Imperial Japanese Army Engineers, Various Units

Configuration: NE/SW 2800 feet

In early fall, 1942, Japanese leaders reprioritized their defense strategy, placing more emphasis on the construction of airfields from which their land-based aircraft could challenge the strength of American air forces. The plan called for the construction of a NE/SW 2,800 ft runway in the area of Holtz Bay on the north side of Attu Island.

By early winter, Japanese troops along with army engineers, commanded initially by Lieutenant Colonel Hiroshi Yonekawa began construction of the runway Holtz Bay. They were to be supported by additional engineer troops and a contingent of forced laborers from Japan but most were turned back during the battle of the Komandorski Islands in March 1943. The Japanese

army was short on manpower and machines, and progress was slow. By the time the US invasion forces landed on Attu, the airfield was still not completed.

With the US reoccupation of Attu, approval was given to complete the runway using steel mats. It was primarily used as an emergency or auxiliary/alternative and was abandoned after US forces left the island.

US forces completed this airfield at the West Arm of Holtz Bay on Attu. The air station was unmanned and rarely used, serving more as a decoy than an operating base.



NARA, COURTESY OF EPHRAIM DICKSON

Kiska Airfield

Operational: August 1943

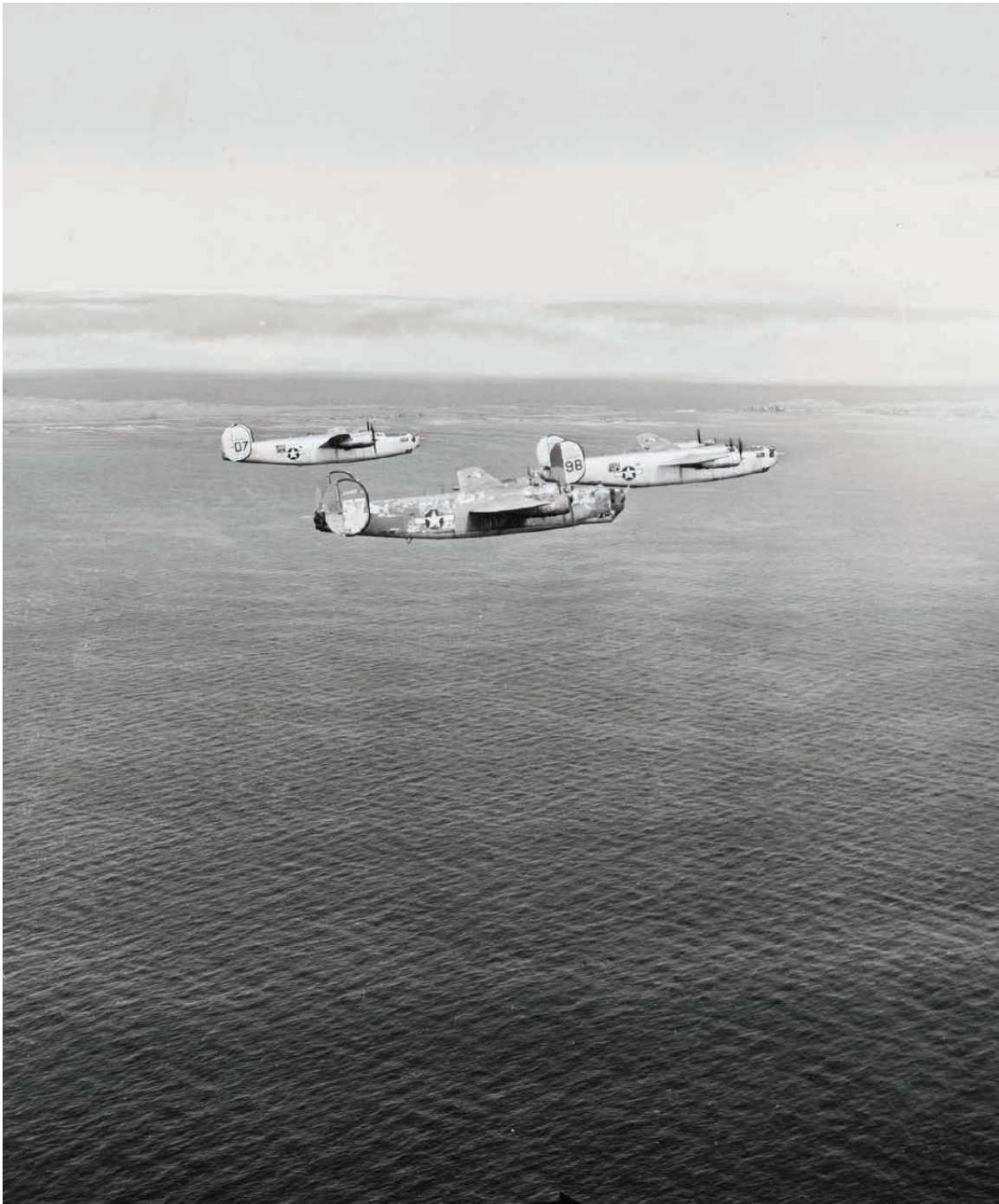
Constructed by: Imperial Japanese Army Engineers, Various Units

Configuration: E/W 2,800 feet, 35,00 feet (extended by US Forces)

The Japanese forces on Kiska operated primarily out of a seaplane base at the mouth of Kiska Harbor. They also began construction of an airfield along a ridge-line at the north edge of their main camp overlooking Salmon Lagoon. To their detriment, they lacked the heavy earth moving equipment needed to complete it in time to make a difference. Even so, with very little equipment, forced to do most everything by hand and under persistent US air attacks, they still managed to carve out a 2,800-foot runway one month before they vacated the island. Instead of the Imperial Japanese Navy reaping the benefits of their labor, an American P-40 was the first to test the bomb pitted airstrip in August 1943, not long after the Japanese had secretly fled the island in the fog.

Upon the US occupation of Kiska, the Army engineers expanded and completed the runway utilizing steel matting as they had with so many others along the Aleutian Chain. The airstrip was used transiently with no permanent aircraft stationed there. When the Army pulled out of Kiska Island in 1945, it was disabled and abandoned. Today, the steel mats remain, buried under layers of thick mossy tundra that over time have slowly reclaimed the land.

The Kiska Battlefield was designated a National Historic Landmark in 1985.



HENRY K. KOWALSKI COLLECTION, NPS

Appreciation

I don't have much use for the Navy,
Being an Army man.
But I must take off my hat to some pilots,
Of this sea-faring clan.

These boys didn't give a damn for the weather,
And Jap lead meant even less.
I've seen 'em fly through storms a-plenty,
Their plane a riddled mess.

I'll always remember the way they informed us,
Of the Jap's position at sea.
And how they told us almost to the minute,
The time and attack would be.

Then when we went on the offensive,
And flew with no land in sight.
We knew that in the clouds above us,
A rescue plane watched the flight.

They even patrolled where we were fighting,
To save us if we fell.
They hid in the clouds from the "Zeros,"
And the ack-ack could go to hell.

So here's to those boys of the Navy,
A bunch of damn good guys,
And especially to those great pilots,
Who fly the PBYs.

Written by First Lieutenant Jacob W. Dixon,
11th Fighter Squadron

Note: The word "Jap," now considered derogatory, was in common use during WWII by both military and civilians in the United States and Canada. It is preserved in this poem and in the one on page 42 to document its historical use.

1 • Holtz Bay Airfield (Japanese)

2 • Alexai Point Army Airfield
• Casco Field

3 • Shemya Army Airfield

4 • Kiska Airfield (Japanese)

5 • Fox Runway, Amchitka Army Airfield

6 • Mitchell Field, Naval Air Station Adak
• Davis Army Airfield

7 • Cape Field

8 • Naval Air Station Dutch Harbor

9 • Thornborough Field

10 • Naval Air Station Kodiak

11 • Elmendorf Airfield

12 • Ladd Army Airfield

13 • Naval Operating Base Sitka

Near Islands
Attu
1
2
3
Agattu

Rat Islands
Kiska
4

Amchitka
5

Aleutian Islands

Tanaga

Kanaga

Adak
6

Atka

Amlia

Andreanof Islands

Seguam

Islands of Four Mts

Fox Islands
7
8

Umnak

Unalaska

Unimak
9



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BILL EULL, COURTESY OF KAREN ABEL

RCAF Pilot Officers Robert Lynch (left) and Jim Gohl, on Adak after a successful mission over Kiska Island. September 25, 1942.

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Karen Abel's passion for the history of the Aleutian campaign is linked to her effort to honor her grandfather, Pilot Officer Robert Lynch, RCAF. P/O Lynch served as a fighter pilot throughout the Aleutian Campaign flying Kittyhawks with 111 Fighter Squadron. On September 25th, 1942 he was awarded an American Air Medal for his participation in a mission over Kiska. For the last decade she has been committed to telling the story of those who served in this brutal yet forgotten conflict.