

Y O U A R E T H E R E

# IN THE LINE OF FIRE

**Look up at the glass windows on these hangar doors. They are pocked with bullet holes from the Japanese attack on Dec. 7, 1941. You are standing right where Imperial Navy machine-gun fire raked this hangar.**

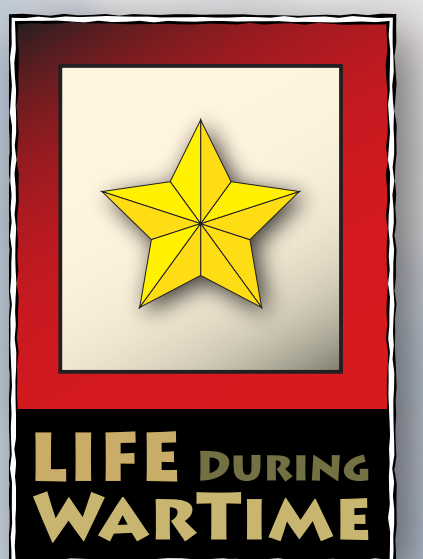


No place on Ford Island was safe. Although the primary target of the Japanese navy were American warships, Japanese pilots also tried to knock out as many aircraft as possible, both military and civilian.

Even the smallest airplane could potentially follow the attackers back to their aircraft carriers and report their position to the Americans. So the attacking Zeros and dive bombers caused as much damage as they could to aircraft, hangars and airfields on Oahu.

It is possible these bullet holes could have come from friendly fire. On the night of Dec. 7, a flight of F4F Wildcat fighters from USS *Enterprise* attempted to land on Ford Island's runway in the dark. Jittery sailors opened fire and shot most of them down, aiming across the runway in this direction. Only one Wildcat survived the crossfire.

The Navy continued to use Hangar 79 throughout the war as a repair facility. The bullet holes were left in place to remind sailors they were working in a combat zone.



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# AMELIA EARHART CRASHED HERE

**Right in the middle of the Ford Island runway, straight out from Hangar 37, Amelia Earhart's first attempt to fly around the world ended abruptly when her Lockheed Electra ground-looped on takeoff.**

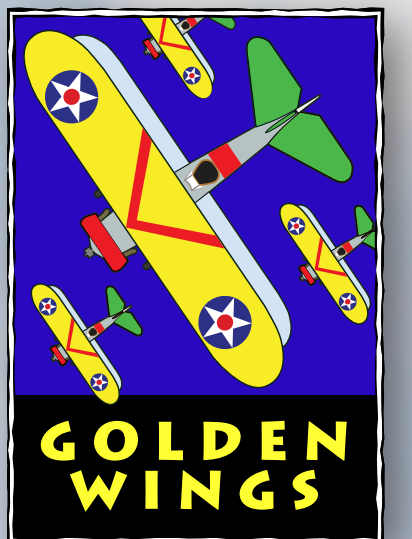


Luckily, no one was hurt in the accident in the pre-dawn darkness of March 20, 1937. The cause has never been determined, but it appeared that Earhart overcorrected the Electra's sideways drift by jockeying the throttles. Too much weight from the fuel-heavy airplane collapsed a gear leg.

Earhart was no stranger to Hawaii. On Jan. 11, 1935, Earhart became the first person to fly solo between Hawaii and the Mainland, piloting a single-engine Lockheed Vega.

Within hours of the crash, Earhart and her team went back to California on a Matson ocean liner. The Electra was repaired, and months later, Earhart tried once again to fly around the world, going in the opposite direction.

This time, in one of aviation's great mysteries, Earhart and navigator Fred Noonan vanished over the Pacific.



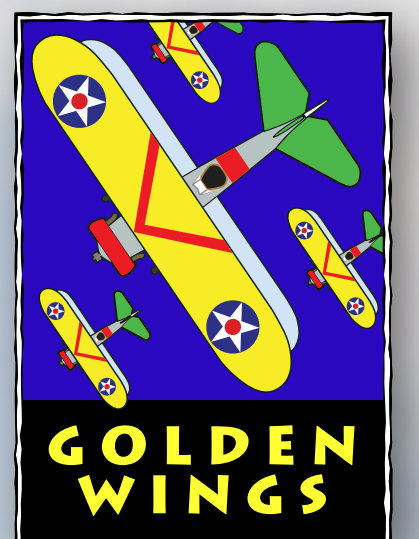
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# HAWAII'S FIRST AIRFIELD

**The open space of the Ford Island runway is the cradle of aviation in the Hawaiian Islands. Although the wooden hangars sheltering the U.S. Army's fragile biplanes are long gone, the airstrip created during World War I still looks much the same as it did in 1917.**

Early flights in Hawaii took off from parks and race tracks. The War Department sent Army Capt. John Curry to scout potential permanent airfields in the islands and he settled on Ford Island, then a sugar-cane plantation. "It had excellent approaches and plenty of water for landings and take-offs," noted Curry. "It faced into the prevailing wind and a land aerodrome could be easily made."



After American ace Lt. Frank Luke was killed in battle, the airstrip was named Luke Field. Luke was the first American aviator awarded the Medal of Honor. Capt. Eddie Rickenbacker



said Luke was "the most daring aviator and greatest fighter pilot of the entire war. His life is one of the brightest glories of our Air Service. He went on a rampage and shot down 14 enemy aircraft, including ten balloons, in eight days. No other ace ever came close to that."

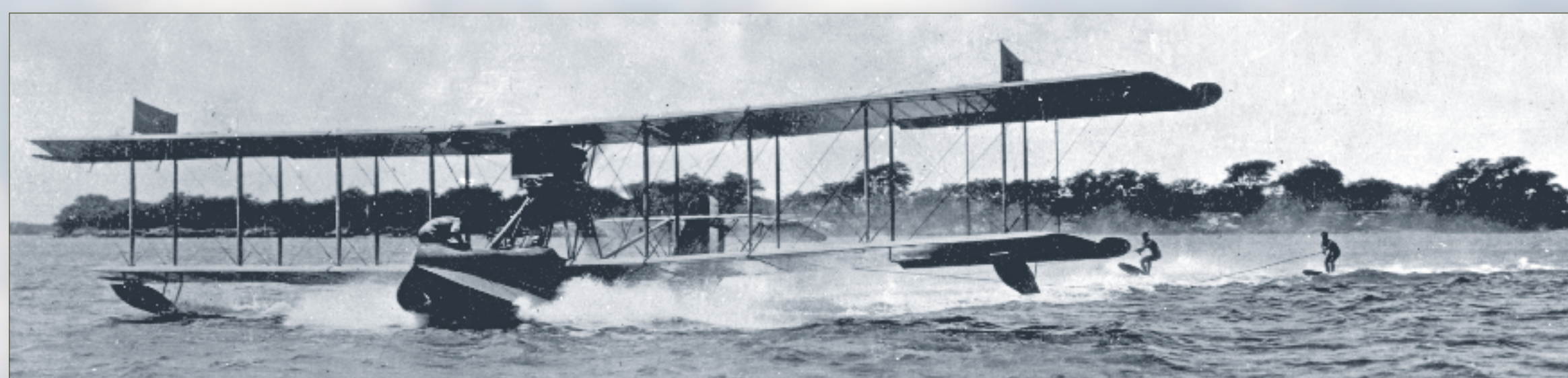
The Army eventually moved away from Luke Field in the late 1930s, and the name transferred to a training base in Arizona.

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# ARMY vs. NAVY

**A Curtiss R-6 seaplane chugging through the skies above Ford Island in 1920 seems like an ideal image of a naval-aviation base. The R-6, however, was a U.S. Army aircraft, one of many seaplanes and amphibians operated by the Army in the years prior to World War II.**

There was a rift between the Army and Navy for mastery of the air. Although this airfield was established by the War Department to be shared between the two services, the Army's 6th Aero Squadron opened Luke Field on the island in 1918, and the Navy did not establish aviation facilities at Pearl Harbor until 1923.



In the meantime, Army aviators entertained civilians by hosting “flying days” featuring activities like water-skiing behind Army seaplanes such as the Curtiss HS-2L flying boat.

With the airfield between them, the Army settled into the north side of the island. Many of the historic Army pilots' quarters are still there on the far side of Ford Island, as well as the Army's seaplane ramp and the oldest wrought-iron aircraft hangar in the United States. The Navy side features most of the large hangars, control tower and maintenance facilities.

Army pilots were restricted to flying over land unless given permission by the Navy to fly over water. “I only had two choices to make every morning,” recalled a young Army officer named Curtis LeMay. “Fly around Oahu clockwise, or fly around Oahu counter-clockwise.”

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# THE CONTROL TOWER

**It certainly had the best view of the attack on Pearl Harbor. It was featured in the movies "Tora! Tora! Tora!" and "Pearl Harbor." In both films, the tower is a rusty hulk, but it didn't look that way at the time.**

What we think of as the Ford Island Control Tower is actually a water tank designed to create water pressure for fire hoses. You can see that the elevator shaft runs up on the outside of the tower structure.

At the time of the attack, Operations Building S84, or "Ops" building, housed the airfield's fire-department garage and barracks as well as administrative offices and the octagonal control cab on the third floor. The water tower was still under construction on Dec. 7, 1941, and the large control cab atop the water tank

wasn't installed until five months later. The original control cab was then converted to an aerological lab for weather forecasting.

Sometime during 1942 the entire tower was camouflaged. The exact pattern and colors are lost to history, as well as the date the tower was repainted in white and orange.



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# APOLLO 10

Imagine it's June 1969, and the Apollo moon landing is only a month away. Standing about where you are right now, Evelyn Farmer took this Instamatic snapshot of her 14-year-old son, Frank Farmer, sitting next to the Apollo 10 space capsule nicknamed *Charlie Brown*.



The first place Apollo astronauts stepped back onto dry land was in Hawaii. Apollo capsules splashing down in the Pacific were all processed through Hangar 79 under the command of Capt. Robert T. Tolleson of the Manned Spacecraft Recovery Task Force, based on Ford Island. Mrs. Farmer was Capt. Tolleson's secretary.

Apollo 10 launched on May 18, circled the moon several times, and returned to Earth on May 26, 1969, near American Samoa. Command capsule *Charlie Brown* was recovered by aircraft carrier USS *Princeton* and delivered to Pearl Harbor. Landing module *Snoopy* was left in lunar orbit. *Charlie Brown* is currently on exhibit at the London Science Museum. After this mission, NASA insisted on "more dignified" spacecraft names.



Frank Farmer recalls that the family was not able to get nearly as close to Apollo 11 due to biological quarantine restrictions. In this recovery picture of Apollo 11, note the astronauts are in airtight, germ-proof suits.

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# HANGAR 37

**You are standing right where the red dot is, above. At the time of the attack, Hangar 37 was the home of Utility Squadron VJ-1. Originally built near the seaplane ramp, Hangar 37 was too small to handle the Navy's large flying boats, so the hangar was disassembled and moved here in the late 1930s.**



Dolphin, Vought O3U Corsair, Curtiss SOC Seagull, Sikorsky JRS-1, Grumman JRF Goose, Brewster F2A Buffalo and Vought OS2U Kingfisher. Note the VISITING AIRCRAFT lettering on the roof of the Hangar 37 offices — this is where transient and scouting aircraft checked in for fuel and light maintenance, a typical chore for base utility squadrons.

The JRS-1 amphibian in the center of the main photograph still exists, in the collection of the Smithsonian Air & Space Museum. Look carefully — you can see the squadron insignia on the nose in the process of being painted out. Along with other amphibians, this JRS took off later during the attack to hunt down the Imperial Japanese attack fleet, but did not find it.



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# FLYING SPIRITS



Someone up there is watching over us. Once in a while, in the rafters of Hangar 79, you'll spot a quiet guardian like the one at left. It's a *pueo*, the Hawaiian word for owl, and in the islands they are legendary.



There are two primary species of owls in Hawaii. The original edition is the actual *pueo* (*Asio flammeus sandwichensis*), a type of short-eared owl endemic to the islands. You see this fierce-faced, golden-eyed version in the picture below. They are an endangered species only on the island of Oahu, where nighttime light pollution dazes them to the point where they can't fly.

The white-faced bird seen in our rafters is the Barn Owl (*Tyto alba*), imported by the Hawaii Board of Agriculture and Forestry in the 1950s to control rats in cane fields. Today this wide-ranging predator is common in the Hawaiian Islands, including the tiny atolls to the northwest.



Owls are known as mythic creatures in Hawaii, rescuing lost souls from the underworld and omens of good luck. *Pueo* are often considered 'aumakua, or ancestral spirits taking animal form. Our museum restoration team calls itself the Hangar Owls, and our F-4 Phantom fighter jet was named *Pueo* when it served with the Hawaii Air National Guard.



If you don't see a *pueo* by looking up, try looking down. In exchange for keeping the hangar free of rodents and large insects, they sometimes leave their calling cards on the museum floor.

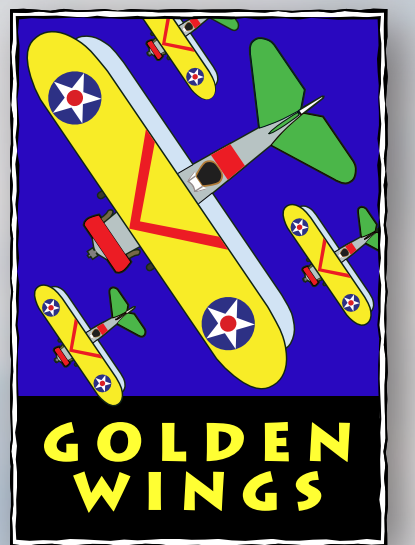
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# MID-AIR REPAIRS

**This Martin NBS-1 bomber is flying above Ford Island on June 23, 1927. A man is clinging to the wheel, trying to fix the tire so they can land!**

Aircraft #68455 of the 23rd Bombardment Squadron, with Lt. George Polk at the controls, was one of five Martins on a practice bombing run. Also aboard were Pvt. Raymond St. Cyr, Pvt. Harold Valentine, and Sgt. Philip Monroe. The tire bolts sheared off as the bomber bounced off the Luke Field runway. Polk dropped a note asking for new bolts to be delivered by air, then rejoined the other bombers on the exercise.



A twin-seat DH-4, with Lt. J.D. Givens at the controls and Lt. Philip Schneeberger in the rear, took off with the packaged bolts and caught up with the bombers. Schneeberger lowered the package on a rope into one of the bombers, but it was the wrong bomber. The package was lost when they tried to pass it back. The DH-4 raced back to Ford Island for more bolts.

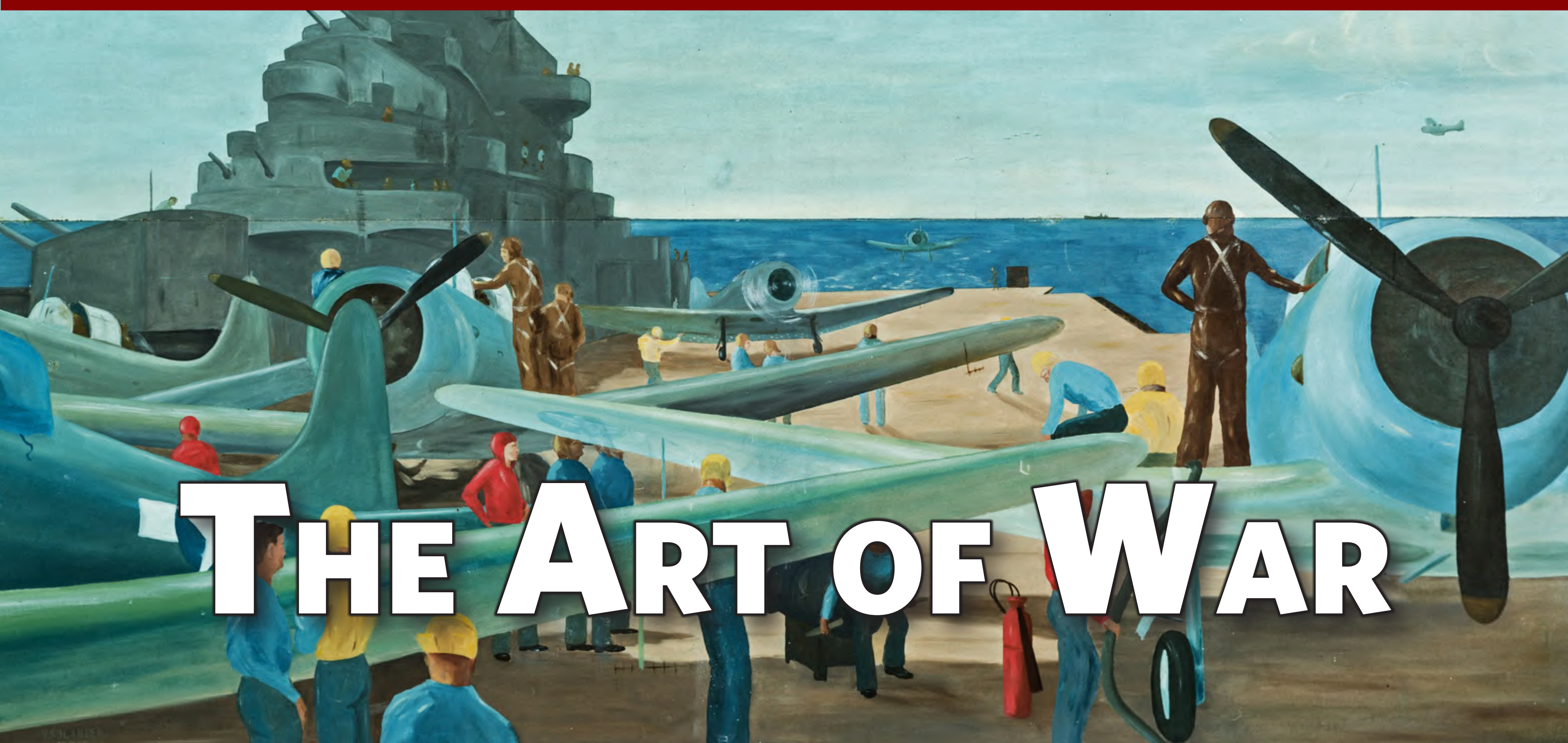
They again intercepted the bombers, now circling over Pearl Harbor. Neither Cyr nor Valentine could grab the package of bolts, so Schneeberger tucked it under his arm and climbed out onto the DH-4's wing, pulling from one strut to another until he reached the wingtip. Monroe did the same on the bomber, and they made a successful mid-air hand-off.

Monroe climbed down onto the Martin's landing gear, hoping to reseal the sheared bolts. But the bombers were bouncing around in turbulent air, and the repair proved impossible.

As the crew prepared to ditch next to Ford Island, Polk ordered the parachutes tossed out onto the runway to save them from a dunking. But one hit the port propeller and jammed the engine. The big bomber stalled at low altitude and slammed into Pearl Harbor.

Later, lying injured with the others in the Army Air Corps crash boat, Polk remarked that perhaps he should have gone into the submarine service.

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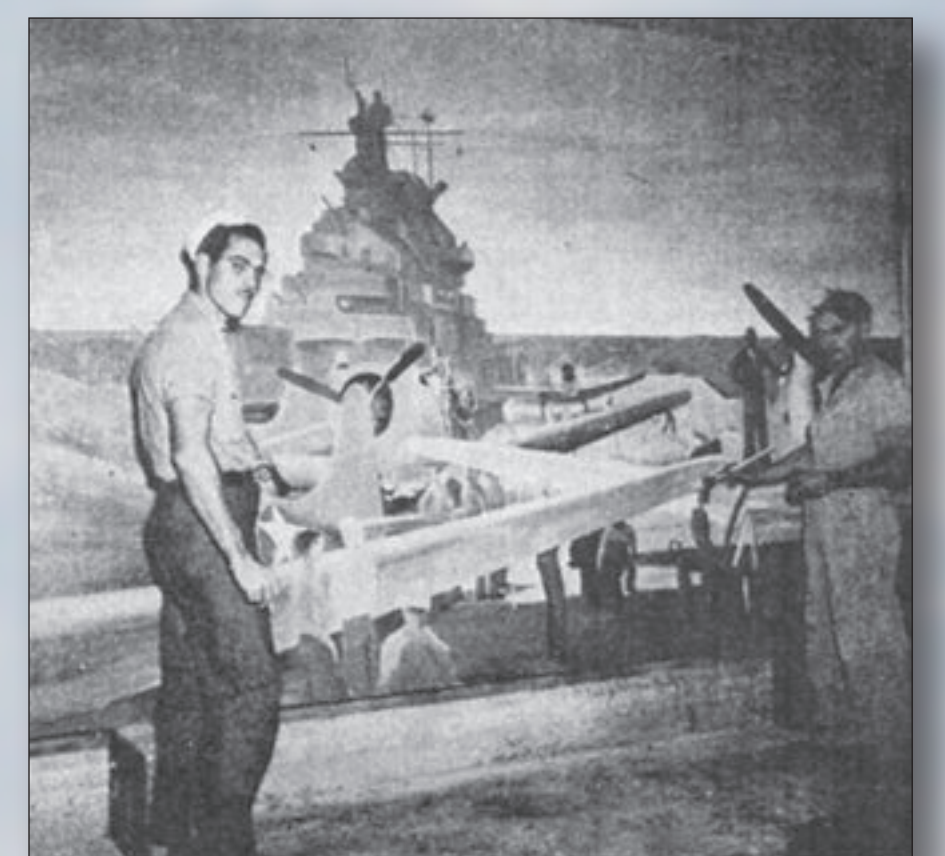
**The history of World War II is written not just in words, but in images. This includes artwork painted in the far-flung outposts of the conflict. Virtually none still exist, lost to time and the elements.**

These six murals decorated the Navy theater at Midway Atoll during the war. The theater was built by the Naval Construction Battalion — famous as the can-do “Seabees” — and were painted by Seabee engineer Victor Nels Solander.

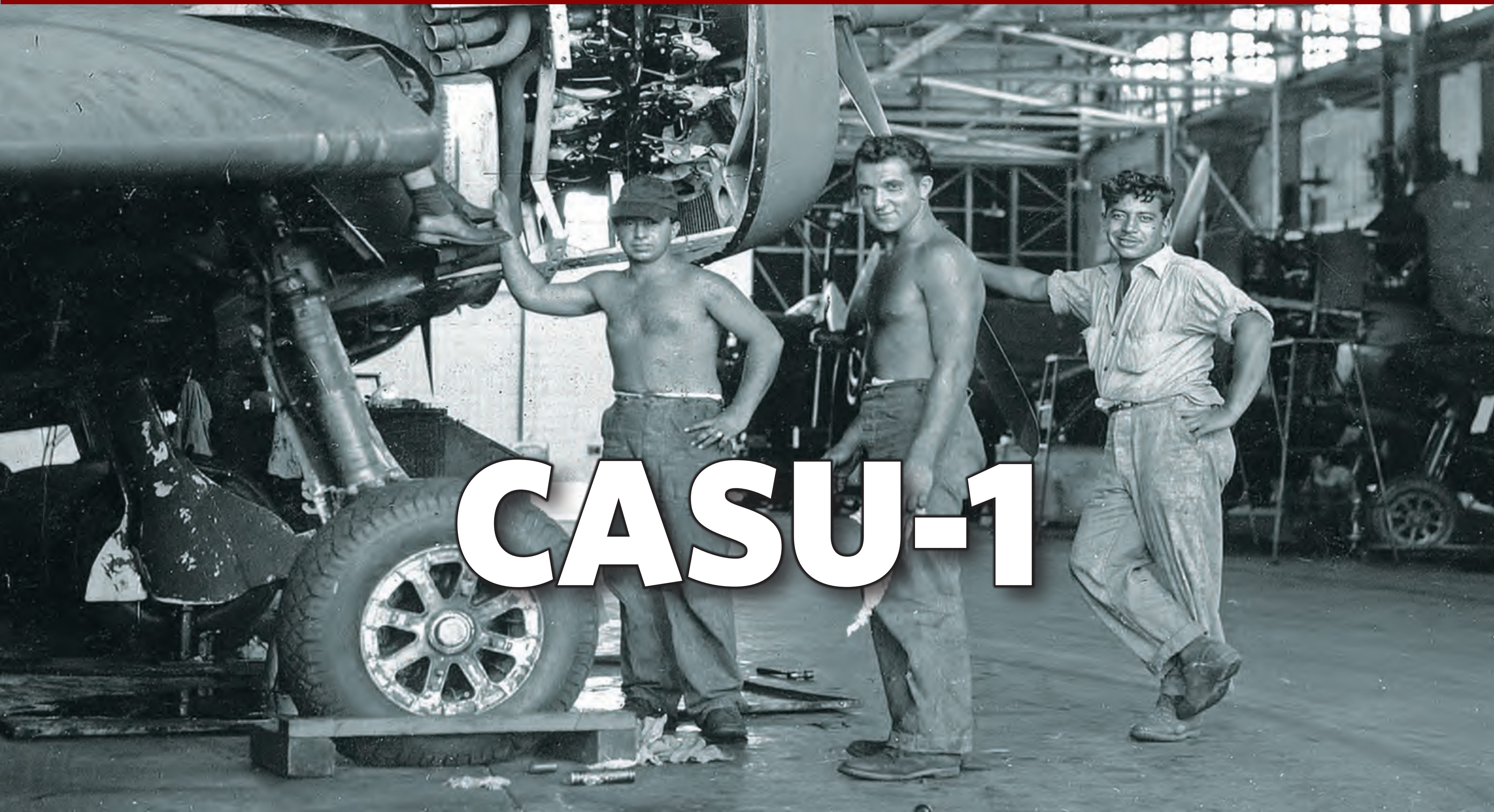


They depict scenes lifted out of the widely scattered reaches of the Pacific War: A South Dakota-class battleship; an invasion of a South Pacific island; An ELCO PT boat (“PT109” was added in the 1960s); a carrier deck filled with dive bombers; a Seabee motorized crane; and a torpedo being loaded into a submarine.

The U.S. Fish and Wildlife Service and the Friends of Midway Atoll National Wildlife Refuge turned to the expertise of Pacific Aviation Museum Pearl Harbor to preserve the crumbling murals. After careful removal and shipping to Pearl Harbor, the murals were loaned to the museum for stabilization and display. The person at far right is the only known image of Solander painting the murals.



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# CASU-1

**It's easy to move aircraft and pilots from an aircraft carrier to a land base for a few days — they just fly in. But what about all the support personnel who keep the aircraft serviced, fueled, and armed?**

This situation led the U.S. Navy to devise the Carrier Aircraft Service Unit, creating permanent support at naval aviation bases. CASU-1, the first such unit, was located in those large former hangars on the other side of the Ford Island runway.



In the picture above, CASU-1 mechanics are working on a F6F Hellcat fighter in Hangar 175, built in 1941. Pearl Harbor's CASU also had at least one version of every type of carrier aircraft in the Navy inventory assigned to Ford Island for familiarization training.



The National Oceanic and Atmospheric Administration built its new Pacific Region Center using structures originally used by CASU-1, including 1930s-era Hangar 130 and bombproof personnel shelter S-181, and also combined large Hangars 175 and 176 into an even larger headquarters building holding more than 700 workers. NOAA also maintains research ships at Ford Island.