

## Survival: 1919-1920

The 1st Aviation Force arrived back in the United States early in January 1919, and was disbanded in February, with most of the remaining personnel and equipment sent to Quantico and Parris Island, Calif. From the remnants of the force, Maj. Cunningham formed a new Squadron D to support the Second Provisional Brigade in the Dominican Republic, and Squadron E to support the First Provisional Brigade in Haiti. In September, the Marine Flying Field at Miami was closed, and the last chapter in the story of Marine Aviation in WW I ended.

The Marine Corps, along with the other services, began a desperate struggle to convince Congress that it should at least maintain prewar levels of personnel, bases, facilities and equipment. Within this overall struggle for appreciation and legislation, Maj. Cunningham fought for permanent status for Marine Aviation. He appeared before such august bodies as the General Board of the Navy, and wrote numerous articles to persuade

skeptics within and outside the Corps of the value of aviation for future military operations. As a result of his efforts and those of other dedicated individuals, Marine Aviation won its battle for survival. Congress established Marine Corps strength at approximately one-fifth that of the Navy — 26,380 Marines. It then authorized an additional 1,020 Marines for aviation and established permanent aviation bases at Quantico, Parris Island and San Diego.

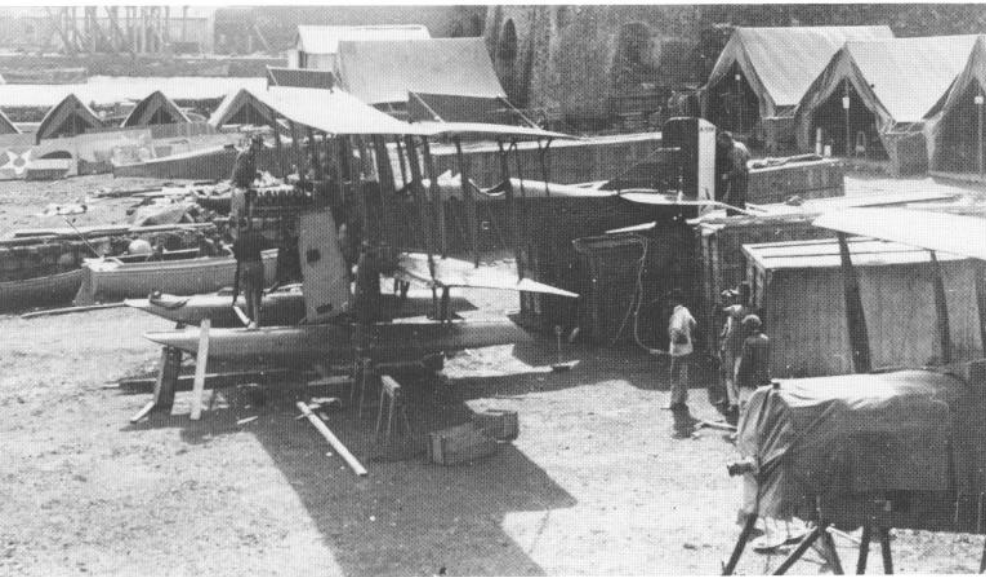
While the postwar situation was being identified in Washington, some more or less permanent operating organizations were shaping up in the field. On October 30, 1920, Major General Commandant Lejeune approved an aviation table of organization. Existing personnel were formed into four squadrons, each of two flights. The First Squadron (flights A and B) consisted of the planes and crews in the Dominican Republic. The Second and Third Squadrons (flights C, D, E and F) were stationed at Quantico, with the Fourth Squadron (flights G and H) at Port au Prince, Haiti, in support of the First Provisional Brigade. The detachment at

Parris Island was designated Flight L, and it was ordered to prepare to move to Guam.

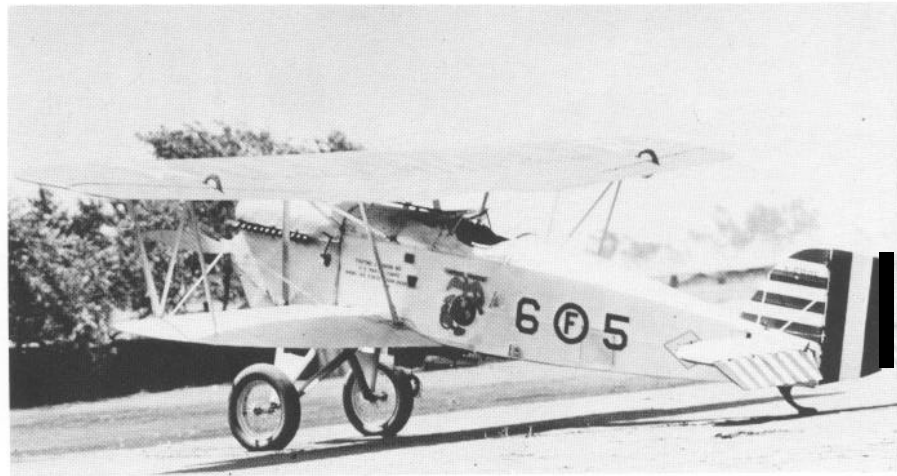
In 1924, the Marine Corps withdrew its air units from the Dominican Republic and, with the additional strength thus made available, Marine Aviation was established on the West Coast. The Second Air Group, which was formed in 1925, consisted of an observation, fighter and headquarters squadron.

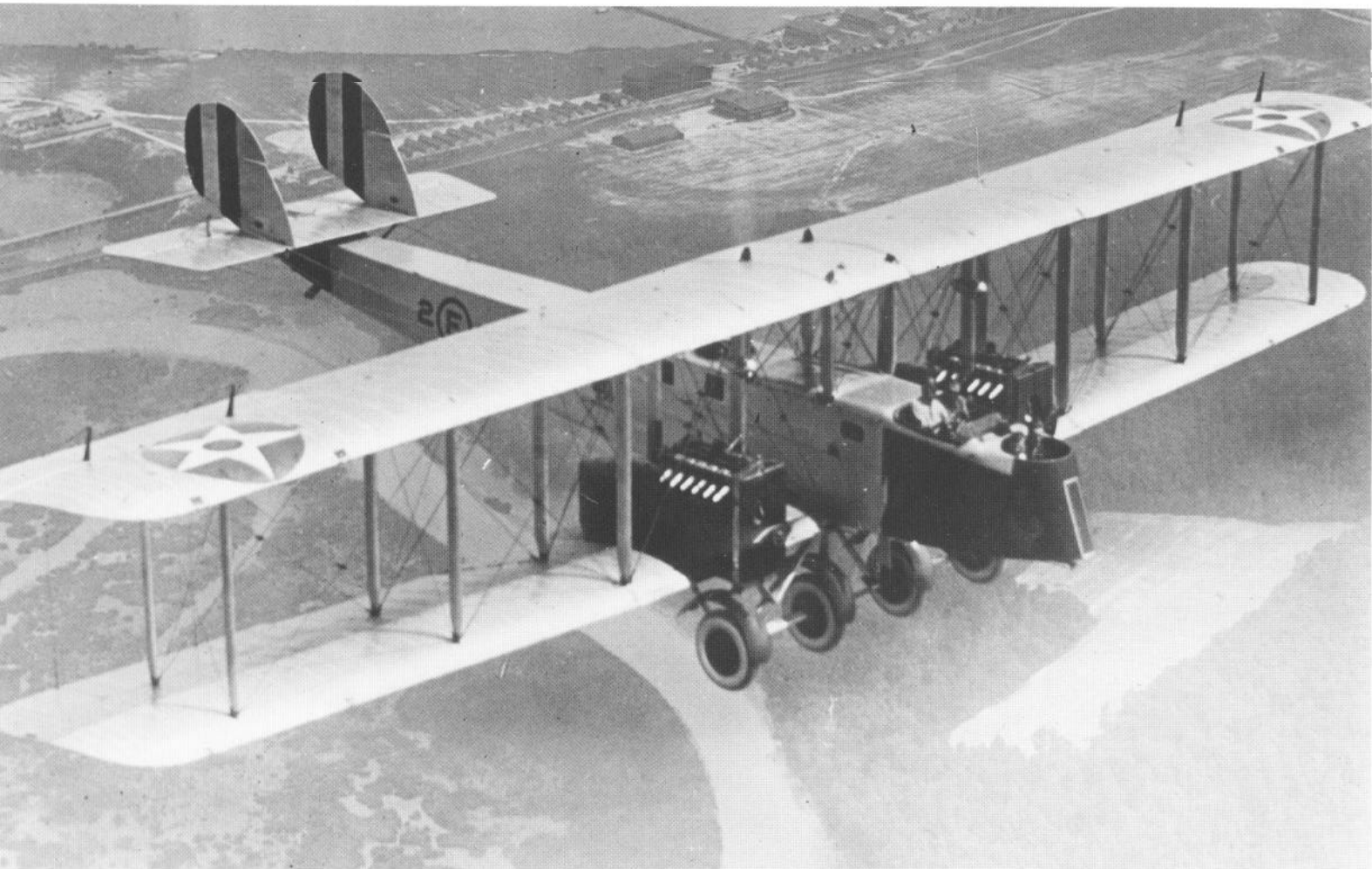
Previously mentioned was the need at the end of WW I for Marine Aviation to prove itself to Congress, the American public, and to the rest of the Marine Corps. The Corps found it necessary to combine serious military exercises with headline-hunting spectaculars in order to make the point for Marine Aviation and for the Corps in general. One of the largest of the maneuvers in this category was conducted in 1922 from Quantico. This exercise was a practice march of 4,000 Marines from Quantico to Gettysburg, Pa. Three of the big Martin MBT bombers were assigned in support of the troops on the march. They flew a total of 500 hours and 40,000 air miles, carrying passengers and freight and maintaining radio contact with the column in execution of simulated attack missions. Similar exercises were held almost annually to keep the operational capabilities of the Corps and Marine Aviation in the public eye.

In addition, Marine Aviators tested new equipment and techniques during the decade. They also made several important long-distance flights and participated in numerous significant air races. One of these flights consisted of two DH-4s led by Lieutenant Colonel



Left, the First Aero Company at Porto Delgado, Azores. Bottom left, a Standard E-1. Bottom right, a FB-1, the first of a long line of Boeing fighters.





**A Martin MT assigned to VF-2M. Quantico, Va. It was the largest aircraft in the Marine Corps prior to WW II.**

Thomas C. Turner, from Washington to Santo Domingo, the longest unguarded flight over land and water made up to that time. Another led by Maj. Geiger was a flight of three Martin MBTs from San Diego to Quantico which took 11 days, with many stops for repairs and fuel along the route. Another dramatic flight was led by First Lieutenant Ford O. Rogers, involving two DH-4s flying from Santo Domingo to Washington, to St. Louis, to San Francisco, back to Washington and on to Santo Domingo. This flight, including engine changes on the way back to Washington, took two and one-half months and 127 hours of actual flying time. It demonstrated the skill of Marine pilots and the technical competence of Marine mechanics.

Air races became an American institution in the twenties. Marines sometimes flew Navy aircraft and at other times flew their own squadron aircraft. A prime participant in the former was Lieutenant C. F. Schilt who flew a Navy seaplane to second place in the renowned Schneider Cup race in 1926. In another famous race, the winning Marine pilot was Major Charles A. Lutz who took first in the Curtiss Marine

Trophy Race at Anacostia in 1928, flying a Marine Curtiss *Hawk*.

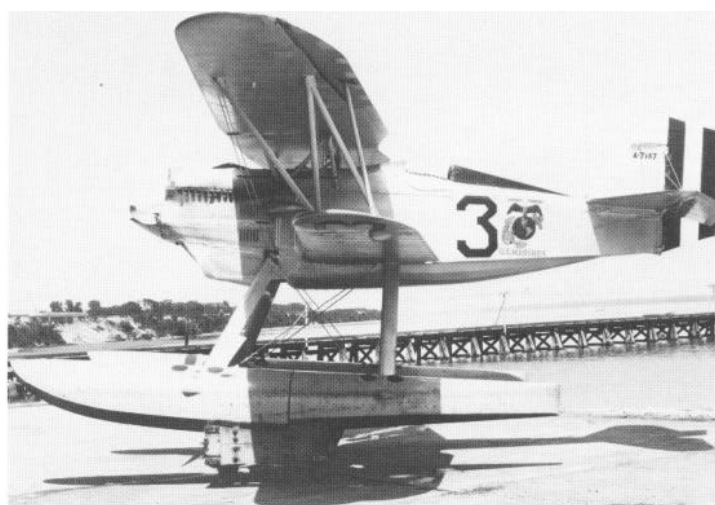
The Quantico Marines had a show schedule of no small proportions well into the thirties. They worked up well-practiced precision show routines which literally put Marine Aviation "on the map." These shows helped to establish a solid reputation for competence and flying skill for Marine Aviation in the eyes of the American public. Prime leaders of these spectacular squadron air demonstrations through the late twenties and into the thirties included Majors "Tex" Rogers, "Sandy" Sanderson, Oscar Brice and many other great Marine pilots — almost always under the expert tutelage of Roy S. Geiger. These public shows, always in addition to the normal emphasis on routine training and proficiency requirements, were important factors in the progress of Marine Aviation to mature stature.

During the twenties and thirties, Marine Aviation had units in support of the brigades in Haiti, the Dominican Republic, China and Nicaragua. The aviators, for the first time, had a real chance to demonstrate their ability to

support ground operations.

In both Haiti and Santo Domingo there was drawnout, tedious guerrilla warfare in largely roadless tropical jungle terrain. Generally, because of limitations of armament and performance of the aircraft — plus the lack of reliable air-ground communications — aviation was most effective in the indirect support role. The ability of aviation to enhance operations in trackless terrain was becoming clear to the Marine Corps through these types of expeditionary deployments.

In Haiti in 1919, Lieutenant L. H. M. Sanderson of Squadron Four made a change in the delivery tactics used in bombing. He abandoned the usual practice of having the bomb sighted and released by the observer in the rear seat of the aircraft. Instead, he put the aircraft into a dive of about 45 degrees, sighted the target over the nose of the plane, and released the bomb himself from the front cockpit, at about 250 feet. He found this method improved the accuracy of the



Top left, a Curtiss F6C-4 fighter. Left, Marine DH-4s over Mt. Momotombo, Nicaragua. Top right, a Curtiss F6C-3 modified for racing.

drops and his success brought about the adoption of the dive method by the squadron. While Sanderson never claimed to be the inventor of dive-bombing, he was certainly one of the first Marine or Naval Aviators to use it as a standard technique.

In addition to operations in Haiti and Santo Domingo, the outbreak of civil wars in China and Nicaragua in 1927 also saw Marine Aviation deploying with the Marine brigades dispatched to each area. In China, Fighting Squadron Three from San Diego, and Observation Squadron Five, which was formed in China with aircraft from San Diego and personnel from Guam, were dispatched to Tientsin. The airfield was about 35 miles from Tientsin and the aviation personnel had to furnish their own security in a very exposed position. There was no combat during their 18-month stay. The squadron flew a total of 3,818 sorties in support of the brigade.

In Nicaragua, the guerrilla-type warfare gave aviation its first opportunity to provide a form of close air support to Marines in combat. In 1927, a civil war led to American intervention. Following were years of sporadic bush fighting

which continued until 1932. Observation Squadron One from San Diego and Observation Squadron Four from Quantico, constituted the Marine Aviation support for the brigade. The Nicaraguan deployment produced some notable achievements by Marine Aviation, precursors of what was to become the Marine air-ground team standard of future decades.

The thirties opened with an economic worldwide crisis, referred to half a century later as the great depression. The effect on Marine Aviation and its allocated portion of Marine Corps and Navy appropriated funds was debilitating. One of the first results was to end Marine Aviation's involvement with ballooning. At San Diego, two observation squadrons were consolidated into one and the same action was taken at Quantico with two fighter squadrons. The squadron at Guam, which had been there since the end of WW I, was returned to the U.S. and decommissioned. Marine Aviation units were all withdrawn from Nicaragua in 1932 and from Haiti in 1934. Thus, consolidation, contraction and postponement became the planning

considerations most commonly encountered at the start of the decade immediately preceding Pearl Harbor.

This cutback was not without its beneficial effects. It reinforced WW I ingenuity displayed by Cunningham and Geiger in "making do with what you've got" and in solving problems with imagination and initiative.

Refinement and definition of the Marine Corps mission took place early in the decade. With the formation of the Fleet Marine Forces (FMF) replacing the East and West Coast Expeditionary Forces, the aviation components of the newly formed FMF became Aircraft One at Quantico, and Aircraft Two at San Diego. The Commandant was responsible for research and the development of doctrine, techniques and equipment for amphibious warfare, much of which was conducted at the Marine Corps schools in Quantico.

What evolved from the Quantico research effort was the Tentative *Landing Force Manual*, published by the Navy Department in 1935. This manual laid out in detail all of the principal steps for conducting amphibious assault. The concepts were tested and improved in fleet exercises during the thirties, and the resulting doctrine guided Marines to their hard-won triumphs in the amphibious assaults of WW II. The manual, as a whole, gave recognition to Marine Aviation as an integral and vital element in the execution of the primary mission of the Marine Corps.

From the mid-twenties, Marine squadrons had qualified aboard fleet carriers from time to time as part of their mission, beginning with the converted collier USS *Langley*. Such operations were often uneven in that the West Coast squadrons gave them more emphasis than they received in Quantico. However, in 1931, two scouting squadrons in San Diego were assigned to operate as

component units of Pacific Fleet carriers until 1934 when they rejoined Aircraft Two.

Prior to the two scouting units' assignment to Aircraft Battle Force, Pacific Fleet, Marine squadrons were somewhat loosely controlled with respect to doctrine and training. From 1931 to 1934, the two squadrons operated under the Navy, affording valuable experience to about 60 percent of active duty Marine pilots. The benefits of this experience were soon transmitted to the training of all squadrons of the Fleet Marine Force on both the East and West Coasts. The spread of this disciplined syllabus training with a clearly defined mission was a real milestone in the evolution of Marine Aviation.

Air operations during the decade reflected the increasing capabilities and enhanced sense of purpose of Marine Aviation. While the races, spectacles and air shows continued they gradually became secondary to fleet problems, amphibious exercises and development, and to annual qualification in aerial

gunnery and bombing. The thirties saw increased participation by Marine Aviation in coordinated exercises which were laying the groundwork for refinement of an emerging concept of the air-ground team.

### Expansion and Training

Of all the armed services, Marine Aviation experienced the greatest expansion during WW II. In 1936, there were 145 Marine pilots on active duty and by mid-1940 the number had only increased to 245. The war in Europe and in the Atlantic was in full swing in late 1939 and this increase of only 100 pilots in four years indicates the measured tempo of the national preparation, slightly more than one year before Pearl Harbor. By the end of 1940, Marine Aviation pilot strength had risen to 425, well over double what it was in 1936, having been augmented by the Marine Corps Aviation Reserve. The reserve at this time was relatively small, tightly knit and, as always, intensely loyal and

responsive. Before the end of the war against Japan, Marine Aviation had reached a total of over 10,000 pilots on active duty.

At the time of Pearl Harbor, Marine Aviation unit and plane strengths were 13 squadrons and 204 aircraft. By the end of the war, just less than four years later, the figures were 145 squadrons and approximately 3,000 aircraft. Total Marine Aviation personnel strength had risen from approximately 1,350 in 1939 to over 125,000 by V-J Day. To accomplish such a herculean task, a base complex was required in the continental U.S., larger than anything seen before by Marine Aviation. On the East Coast, Marine Corps Air Station (MCAS), Cherry Point, N.C., replaced Quantico as the focal point of aviation training, and today remains the hub of aviation activity east of the Mississippi. Similarly, El Toro, Calif., replaced San Diego on the West Coast and today continues as the center of Marine air operations oriented to the Pacific. In both cases, the Marine air-ground team concept was a paramount





Opposite page, all of Marine Corps Aviation on the West Coast in 1932. Left, new aircraft arrived in the form of the Grumman F3F-2 in 1939.

factor in site selection, as the two centers are in close proximity to the major Marine ground bases on each coast, Camp Pendleton in California, and Camp Lejeune in North Carolina.

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## II. World War II

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The First and Second Marine Aircraft Wings (MAWs) were commissioned in July 1941, the First at Quantico and the Second at San Diego. Each had only one Marine Aircraft Group (MAG) by December 7, MAG-II at Quantico and MAG-21 almost entirely at Ewa, Hawaii, since January. Deployments by some squadrons and detachments of others had been made from MAG-21 prior to December 7. Thus, of the 92 MAG-21 aircraft complement, 44 were deployed and 48 were on the field at Ewa that fateful Sunday morning.

The attack at Ewa was simultaneous with similar attacks on all air installations on the island of Oahu. At Ewa, every Marine plane was knocked out of action in the first attack. Aircraft were not widely dispersed because a general warning about the possibility of sabotage had been issued just hours before, and planes were parked near the runways, away from the perimeters of the field area, to protect them from any local action on the ground.

At 0755, two squadrons of Japanese fighters swept in from the northwest on low-altitude strafing runs and, with

cannon and machine guns, blazed the parked planes. The strafing runs were repeated again and again until all aircraft were destroyed. MAG-21 lost four Marines killed in the attack, and 13 were wounded. Of the 48 planes, 33 were demolished, with the remainder, except one, suffering major damage. One R3D transport was at Ford Island for repairs and somehow escaped damage in the attacks there. Fortunately, no carriers were in port on December 7. *Enterprise* was on the way back from Wake where she had delivered the 12 F4Fs of VMF-211, and *Lexington* was en route to Midway with 18 SB2U-3s of VMSB-231. One thing was unquestionably clear. The nation was in for a long and bitter fight.

### Wake Island

Wake is a tiny atoll some 2,000 miles west of Honolulu. It was first claimed for the United States in 1898, but was largely neglected until jurisdiction over the island was passed to the Navy Department in 1934. In 1935, Pan American Airways chose Wake as a stop on its clipper route to the Orient. Prewar Pacific Fleet planning included Wake Island, but work was not begun on a projected seaplane base at the island — to support long-range reconnaissance of the mid-Pacific areas containing the Japanese-mandated island — until early 1941.

The first military force to arrive on

Wake was the advance detail of the First Marine Defense Battalion on August 19, 1941. Major Paul Putnam and his 12 F4F-3s aboard *Enterprise* departed the ship on December 4, for the relatively unfinished strip. They found the strip long enough for operations, but too narrow for any but single-plane takeoffs, inadequate with respect to taxiing surfaces, and without any revetments for the parking and dispersing of aircraft. VMF-211 had recently received its new F4Fs and barely had time to become familiar with them.

There was no radar on the island and the only fueling equipment for the aircraft was by hand pump from 55-gallon gasoline drums. Maintenance shelters for the mechanics on the line were practically nonexistent, as were any storage facilities for tools, maintenance gear and the few spare parts the squadron could bring with it. In addition, there were only two mechanics, and a preponderance of ordnancemen, in the advance party of the squadron which had arrived by ship November 29.

First word of the attack on Pearl Harbor was received early in the morning of December 8. Maj. Putnam was already airborne, on patrol with four F4Fs. When he landed and heard of the attack, a second patrol of four was launched. While they were north of the island at 12,000 feet, the first attack came undetected from the south through a rain squall at 1,500 feet — 36 twin-engine bombers. The bombing and strafing attack was devastating, leaving the squadron with only the four planes airborne and inflicting a casualty count of 20 killed and 11 wounded. The major supply of aviation gasoline was destroyed, as were the tools, the few spare parts and the maintenance manuals for the new planes. All that was left were the four F4Fs and the salvageable parts from the wrecked remains of the rest.

At 1145 on the 9th, the second raid hit but this time there was fighter opposition to flame one bomber, and anti-aircraft (AA) fire to get another. However, the damage was again severe. When the enemy came again on the 10th, Captain Elrod got two bombers, but the flight of 26 Japanese planes hit a supply of dynamite and set off all the three-inch and five-inch ready ammunition at one AA battery and one seacoast battery nearby.

Early on December 11, a Japanese task

force arrived off the southern tip of the island and prepared to land. Shore batteries, in a 45-minute action, scored many hits and sank one destroyer (the first Japanese surface warship to be sunk by U.S. naval forces in WW II). The Japanese force abandoned the landing attempt and withdrew. Airborne during the action were Maj. Putnam and Capt. Elrod, Freuler and Tharin. As the force retreated, they went to work with 100-pound bombs and repeated strafing runs, scoring bomb hits on two light cruisers and a medium transport. The strafing caused one destroyer to blow up about 20 miles offshore. The ship's AA fire cut Elrod's main fuel line and his plane was wrecked as he made a beach landing just short of the air strip. Freuler's engine was badly shot up as well.

However, less than four hours after the landing attempt was thwarted, 30 bombers were again over the island. Lieutenants Kinney and Davidson hit them, with Davidson getting two, Kinney damaging another, and AA knocking down one and damaging three more. On the 12th, an early raid by flying boats was met by Capt. Tharin, who shot down one of the two four-engined aircraft. There was no further raid until the 14th, when the early seaplane raid was repeated, followed by the return of the 30 bombers from Roi at 1100. The raid killed two Marines and wounded a third, and also made a direct bomb hit on one of the two remaining fighters.

The make-shift engineering section continued its heroic efforts, trading from plane to plane and salvaging from wrecks so that, by December 17, there were still two serviceable F4Fs available. On the 20th, a Navy PBY landed in the lagoon and brought word from Pearl Harbor of a relief force on the way. It took off on the return flight at 0700 with unit reports, mail and urgent administrative matters. It was the last contact with Wake from the outside.

Just one hour and 50 minutes after the PBY took off, 29 bombers and 18 fighters arrived over the island, and this time there was a more ominous aspect about them. They were carrier types, indicating that new weight had been introduced to soften up the island defenses. Three hours later, 33 bombers from Roi arrived and reduced the AA defenses of the island to a total of only four three-inch guns left of the original 12. The two F4Fs were still serviceable. On December 22nd, Freuler and Davidson had the morning patrol, when 33 bombers and six fighters arrived from the carriers. Capt. Freuler managed to get one of the fighters but, in so doing, debris and flames from his target disabled his plane. As he headed back, wounded in the shoulder, to attempt a forced landing on

the strip, he caught a last glimpse of Davidson with enemy fighters on his tail. Freuler crash-landed his burning aircraft on the field, but Davidson was not seen again. Now the island was without aircraft and the remaining personnel of VMF-211 joined the defense battalion as infantrymen.

On the 21st and 22nd, the relief task force was about 600 miles from Wake. Because the ship losses and damage sustained at Pearl Harbor put a very high premium on what was left, the decision was made, reluctantly, on the 23rd, to turn back to Pearl Harbor.

In the early morning of December 23, the first Japanese troops landed on Wilkes Island, part of the Wake Island complex. At 0700, Commander Cunningham, the island's commander, ordered its surrender.

Marine Aviation did not participate again in early defensive operations until the Battle of Midway. Along the route to Australia, there were other islands to be defended. Airfields were built on most of these and, as soon as they were ready, Army, Navy or Marine aircraft units were assigned. Although the Japanese took Guam and the Philippines in the early days following Pearl Harbor, none of these island bases on the route to the southwest Pacific suffered the fate of Wake Island.

With the fall of Wake Island, the immediate concern of the 2nd MAW and MAG-21 was the reinforcement of Midway and the closest of the outer islands, from which a Japanese force could interdict the routes to and from Hawaii and the southwest. Of almost equal concern was the earliest possible provision of air defense for those Allies-held islands farther out on the route to Australia and the southwest.

All of the lifeline "route islands" were in American or British hands, but the only one that had any air defense was Fiji, where 22 British planes were based. Colonel Larkin of MAG-21 began strengthening Midway almost immediately after Pearl Harbor by dispatching Marine Scout Bomber Squadron (VMSB) 231 when it returned from deployment aboard *Lexington*. The long overwater flight was made one week later on the 17th. It was a major accomplishment to get the squadron ready to deploy again in one week's time. In addition, the arrival of VMF-221 was like a Christmas present on the 25th when it flew in from *Saratoga* with 14 F2As, on its way back to Pearl Harbor from the aborted relief task force for Wake. Aviation deployments came from elements of both the 1st and 2nd wings.

An important step toward organized expansion was taken on March 1, 1942. Squadrons were broken into as even a



In 1940, the 1st MAW HQ aircraft was this Curtiss SBC-4.

distribution of talent as possible, to form additional Marine air groups and fighter or bomber squadrons. For the most part, the reorganization was ahead of the equipment curve and the new units struggled along with minimum aircraft, sending whatever was available in planes and pilots to the MAG at Midway.

Personnel shifts continued in a constant effort to spread what experience and talent were available, as widely as possible. Regrettably, inexperienced and partially trained pilots generally had to be moved westward to Midway and Samoa, with some veterans going back to Ewa and the West Coast to take over new squadrons. The net effect was to turn Ewa, Midway and Samoa into training bases with minimum aircraft assigned. This was the case on the eve of the battle of Midway at the end of April. A typical squadron on the West Coast in the spring of 1942 would have as many as 60 lieutenants just out of flight training and only six obsolete F2As to fly.

## Battle of Midway

After the Battle of the Coral Sea, intelligence increasingly indicated a brewing assault by the Japanese, with Midway Island the target for invasion. Its occupation would give the Japanese the ability to control and interdict any operations from Hawaii.

On May 2, Admiral Chester W. Nimitz made a visit to Midway and, afterwards preparations for an attack intensified. By the end of May, the airfield was literally choked with any aircraft that could be spared from Hawaii. Included were four B-26s and 17 B-17s of the Army, and six Navy torpedo planes of the latest type. The Navy patrol planes, which had been based on the island from the beginning, now totaled 16. MAG-22 had 19 SBD-2s, 17 SB2U-3s, 21 F2A-3s and seven F4F-3s. The SBDs and the F4Fs were to carry Marine Aviation well into the start of its