

The Fort Kam Crowd

by
Bob Chenoweth

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It was a little after 7 a.m. on a warm Friday morning, Aug. 8, 1913. A young Coast Artillery Corps lieutenant named Harold E. Geiger sat on the lower wing of a bamboo, spruce, and linen covered biplane. The 75-horsepower, eight cylinder Curtiss motor sputtered and backfired, and the smell of motor oil filled the air as the plane—called simply Signal Corps No. 8—bobbed like a cork on its single pontoon in the middle of the channel entrance to Pearl Harbor. As Geiger opened the throttle and turned the plane east into the 10 mph wind, he was about to make history. It was the day of the first military airplane flight in Hawaii.

In 1908, the Corps of Engineers began construction of massive coast artillery batteries at Fort Ruger and Fort DeRussy to protect Honolulu Harbor and at Fort Kamehameha to protect Pearl Harbor. At Fort Kam, the most important gun position was to contain two 12-inch disappearing carriage rifles, mounted in a 500 foot long concrete and steel fortress. The Coast Artillery represented the state of the art in

modern technology, and Second Lieutenant Harold E. Geiger, U.S. Military Academy Class of 1908, must have thought one day he'd command a powerful gun battery like the one under construction at Fort Kam.

But a new technology was sprouting wings at Fort Myer, Virginia, as Orville Wright flew the Wright "Military Flyer" in tests that would lead to the purchase of the first military airplane.

By a twist of fate, these 1908 trials resulted in the crash of the Wright plane and the death of a young Army officer riding as observer with Orville Wright. The officer was a pioneer in aviation experiments fostered by Alexander Graham Bell and Glenn H. Curtiss. He was the first military man to pilot an airplane and tragically was the first person to die in an airplane accident. His name was Thomas E. Selfridge and the story of the first military aviation experiment in Hawaii took place in the shadow of the 12-inch gun battery that bears his name.

Few officers were quick to see that aviation could serve as a valuable adjunct to the coast defense system. On Aug. 1, 1907, Office Memo No. 6 created an Aeronautical Division within the Signal Corps of the Army. It was this division to which Selfridge and later Geiger were detailed.

By 1912, airplane performance had improved greatly and the Army established a flying school at College Park, Maryland, to train its fledgling air force. The school was divided into sections, since the Army purchased planes from both the Wright brothers and Glenn Curtiss. Each manufacturer used a different method to control their planes in flight, so separate instruction was required.



Harold E. Geiger at North Island, California, in 1913. Plane is a Signal Corps No. 25, a Burgess H. (Photo: Cole Collection, U.S. Army Museum of Hawaii)

A modern airplane is controlled in three axes called longitudinal, vertical and lateral. The longitudinal axis is controlled by foot pedals that move a rudder causing the plane to turn left or right. The lateral axis is controlled by moving a "joy stick" or wheel left or right, causing a control surface on the wing (the aileron) to "bank" the plane left or right.

By pushing the stick or wheel forward or back, elevators cause the plane to climb or dive. By using these controls in synchronization the plane can be made to fly smoothly through the air. In the Wright system of control, the entire wing was twisted or "warped" in order to get the plane to bank. This was done by shifting the body from side to side on a seat connected to the wingtips by wires. The elevators and rudder were controlled with vertical levers on each side of the pilot. This system lost its practicality as higher speeds were achieved.

Curtiss planes used a rudder and elevator system controlled from a column with a wheel at the top. Turning the wheel caused the rudder to turn left or right; pushing the column forward or back caused the plane to dive or climb.

Lateral movement was controlled by a shoulder "yoke" system

that controlled ailerons mounted between fixed wings on their supporting struts. The pilot leaned against a bar that was next to his shoulder causing the plane to bank in the direction he leaned.

Harold Geiger trained on Curtiss airplanes at College Park and also with the Hydroaeroplane Detachment at Washington Barracks (now Fort McNair in Washington, D.C.), flying the Curtiss seaplanes. In late 1912, the College Park school was divided for the winter, the Wright section going to Augusta in Georgia, and the Curtiss section going to North Island, near San Diego, California, where Curtiss had a winter flying school.

Because of his experience and leadership, Lt. Geiger was placed in command of the North Island detachment and was named commandant of the Army flying school upon his arrival on Jan. 1, 1913.

The North Island school became the primary training center for the Army when the Wright/Augusta school closed and all activity shifted to North Island.

Until this time all military planes lacked a fuselage that was covered. The pilot and passenger sat on seats attached to the lower wing and were fully exposed to the wind. These planes were called

"pushers" because the motor faced to the rear and drove a propeller or propellers that were mounted behind the wing and "pushed" the plane through the air.

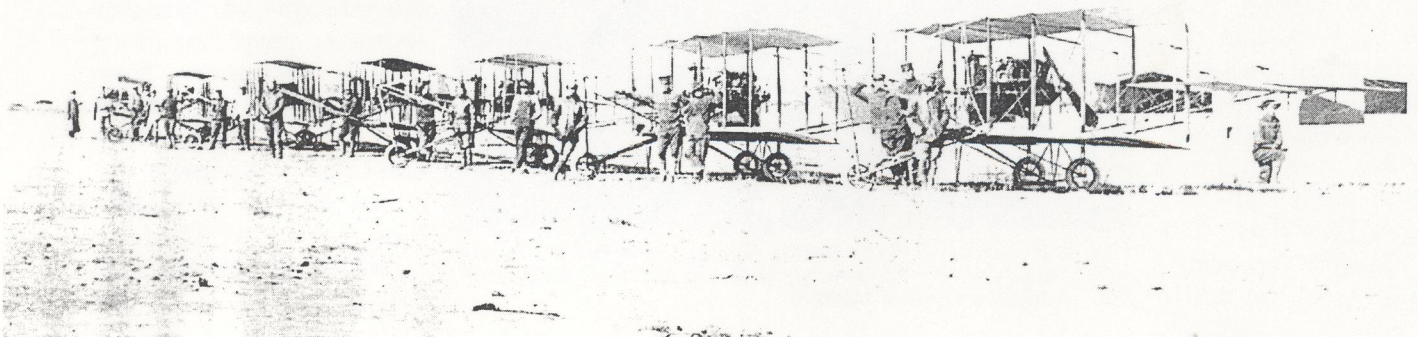
In late 1912, Curtiss began constructing a new type of plane that would set the pattern for future designs. It was intended to meet an Army requirement for a "Scout" plane capable of a speed of 60 mph while carrying a load of 800 pounds, including a fuel capacity for six hours of flight.

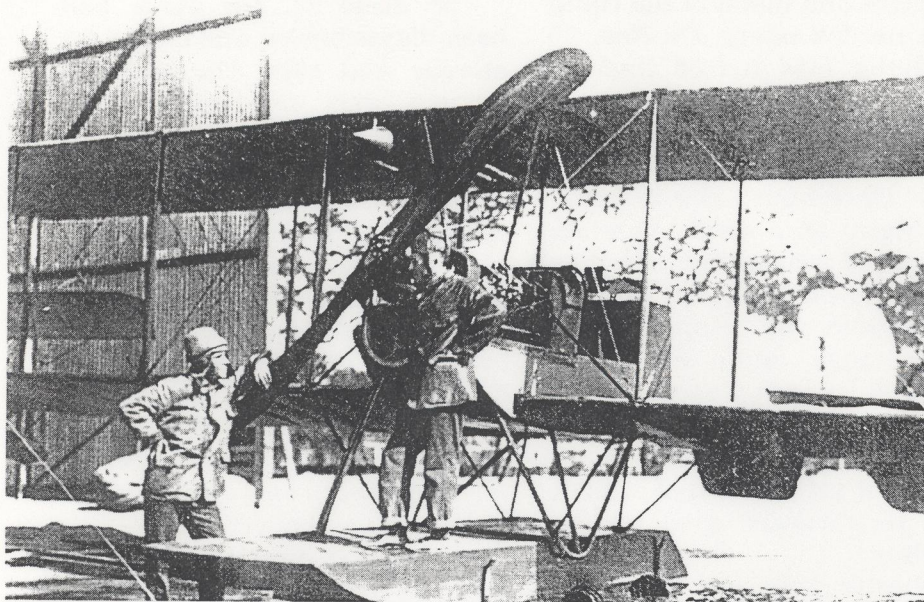
The engine was mounted in the front, ahead of the pilot, and a dual control was provided in an enclosed cockpit. The propeller "pulled" the plane through the air, thus the Curtiss designation for this aircraft—Model G "Tractor Scout."

The Model G was shipped to North Island on Jan. 24, 1913, for testing. Army and civilian pilots flew the plane and Lt. Geiger became especially familiar with its characteristics. It underwent testing and modification at North Island and was finally purchased by the Army on June 12, 1913, being designated Signal Corps airplane No. 21.

In 1912, two planes were sent to the Philippines under the command of Lt. Lahm, to provide instruction for officers who want-

Curtiss "pushers," including Signal Corps No. 8, at North Island. Lt. Geiger is leaning against 2nd aircraft from right. (Photo: Glenn H. Curtiss Museum)





Lt. Geiger standing on float of Signal Corps Airplane No. 21, a Curtiss Model G tractor "Scout." (Photo: Cole Collection)

ed to transfer to the aeronautical division. With the closing of the Augusta school, only the newly created Philippine school and North Island remained.

Around April, 1913, General Frederick Funston arranged for a detachment of two planes to be sent to Hawaii for training pilots for Coastal Patrol and cooperation with the Coast Artillery. It was actually decided to send the Model G to Hawaii even before it was purchased by the Army. Geiger was the natural choice to lead this detachment.

He selected Signal Corps No. 8 to go also, since he had flown the plane extensively both at College Park and North Island.

Old No. 8 had been converted to a float plane following the crash of the Army's first flying boat, the Curtiss Model F. George Purington, an engine mechanic employed by Curtiss, was selected to go with Geiger, as were twelve enlisted men.

On July 5, 1913, the Army transport ship *Logan* left San Francisco for Honolulu with the

detachment of men, its two airplanes, two tent hangars, machine tools for a complete machine shop, two motorcycles, and various other equipment and spares to establish the flying school. The *Logan* arrived at Honolulu on Sunday morning, July 13.

Geiger had instructions to establish his school at Schofield Barracks, but after visiting the site he decided that Fort Kam would be more suitable, since flights from land or water would be possible.

The Army made almost no provision for the arrival of Geiger's detachment, so he faced many difficulties getting established. It took four days before part of the detachment's equipment could be moved from the Fort Kam engineer's wharf to the station site, less than one half mile away. Other equipment, which came by rail to Puuloa train station, two miles from Fort Kam, sat for days until a truck could be commandeered. Tent poles were missing, funds were not provided for basic camp equipment, and no money was

available to purchase wood to construct the machine shop building. The canvas hangars were two of the oldest in service and were already worn out from use at North Island. Signal Corps No. 21 was untried as a seaplane, having been converted at San Diego, but not tested.

The camp was officially established as the Signal Corps Aviation Station, Fort Kamehameha, on July 17, 1913, but things came together very slowly and morale began to suffer.

It was not until late July that assembly of the two planes began. On Friday, Aug. 1, Signal Corps No. 8, the "pusher," was declared ready for use. In order to put the plane into the water it had to be pushed on a small cart over the tidal flats "a distance of fully one quarter mile." Taxi tests were conducted on the water that day for about ten minutes, but no flight was attempted.

Geiger decided to attempt a flight the next day, but the pontoon was damaged while pushing the plane over the rough coral flats. It had to be taken back to the hangar to replace the pontoon with a spare.

It was not until Aug. 8 that Geiger made history with "a short flight with machine No. 8 in order to test the balance of this machine."

Geiger described the hazards: "The entrance to Pearl Harbor, (except the channel) is a flat coral reef and the water except at high tide is so shallow that it is extremely dangerous to attempt to rise or land anywhere else than in the channel. The presence of buoys, ranges and stakes also increases the danger of rising or landing anywhere than in the channel."

Geiger was compelled to land twice because of the gusting winds while attempting a turn, a condition he had never experi-

enced at North Island. On the 9th he flew again, this time with a passenger, to test the balance with two people.

Because of the kite-like construction of these planes, Geiger had to limit flying to times of little or no wind, which occurred early in the morning. This was often compounded by low tide, which made it difficult or impossible to get the planes to the channel.

Geiger proposed that the Engineers build a track out into the water to facilitate launching the planes regardless of the tide, but no funds were available at first.

Seven flights were made during the week of August 17 to 24, for a total of one hour and 54 minutes of flying.

On the 27th, Geiger flew No. 8 with a passenger again, and on the 28th took the "Tractor Scout" (No. 21) into the air for the first time. He described the flight as a series "of short jumps over the water," which lasted 35 minutes.

The short flights continued through mid-September, when the post commander forced the Aviation Station to move a short distance to make way for some temporary barracks. Geiger was back in the air shortly after the move, but was very disappointed at not having been able to actually instruct new pilots. Several officers had been selected, but because of the dangerous conditions they were sent to North Island to train.

On Oct. 6, Geiger made the first of a relatively spectacular series of flights east from Pearl Harbor over to Honolulu, later flying farther down to the vicinity of Diamond Head. These flights were made with the "Tractor Scout."

On Oct 24, Geiger received a telegram dated the 20th, ordering him to stop flying No. 21 because of the deteriorating condition of

the plane. The hangar tents were in tatters and much of the equipment needed repair. On Nov. 25, all flying was halted and the planes were crated for storage to avoid damage.

After securing more funds in early December, construction was begun on a wood frame and corrugated iron roofed and sided hangar. The track Geiger had proposed earlier was completed prior to the hangar and a small truck was built for each plane. The hangar was completed on Jan. 3, 1914 and shortly after Geiger went on leave and returned to the Mainland. He returned some time in March.

Shortly after his return, in late April, both machines were re-assembled, even though all "pushers" had officially been condemned on Feb. 8, 1914, and withdrawn from service.

Signal Corps No. 21 made some short flights at the end of May. In mid-June a Signal Corps inspector came to inventory the planes and equipment for the purpose of declaring them obsolete and to sell them at auction. After the inspection, Signal Corps No. 8 was quickly disassembled and stored in crates. In late June, Geiger attempted to fly No. 21 again, but his record does not make clear

if the plane actually flew.

By June 27, the plane had been disassembled and crated for storage and sale. The airplane engines were returned to San Diego and the planes were put up for auction in Honolulu on Sept 1. No one showed up, so the auction was called off. Plans were made to ship the planes to San Francisco in hopes of selling them there. However, both planes were sold in Honolulu on Nov. 12. Signal Corps No. 8 was purchased by Mr. T.F. Bradshaw for \$200, and Signal Corps No. 21, the revolutionary "Tractor Scout," was sold for \$250 to an unknown buyer.

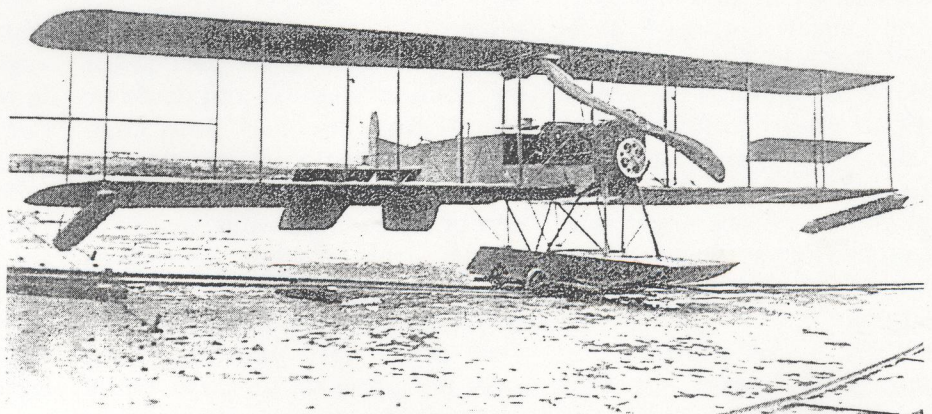
The school was by no means a success, but the work of Harold Geiger and his men paved the way for the successful establishment of the 6th Aero Squadron in Hawaii three years later. Geiger made many valuable suggestions for the establishment, organization, and equipping of future airplane squadrons.

Harold Geiger returned to North Island and had a distinguished career in military aviation, specializing in balloon operations during and shortly after World War I.

On May 10, 1926. Maj. Harold

(See "FT. KAM" on page 50.)

S.C. No. 21 on the track built to cross tidal flats at entrance to Pearl Harbor. (Photo: Cole Collection)



Medical School at that time), where his uncle was the first black to graduate, but was blocked by prejudice. He then attempted to get into Howard Medical School in Washington, D.C., but was turned away when he didn't have the money for entry. Bland then began a career with the Department of Defense where he worked his way up to the Director of Planning and Management at the Defense Construction Supply Center in Columbus, Ohio. During his career, Mr. Bland had had many accomplishments. He wrote the first and only policy manual for the Federal Catalogue System, which is still used today by the U.S., NATO, and other friendly

foreign nations. He also developed the System of Logistics Information Interchange between the Military and the Defense Logistics Agency.

Bland had also received many awards throughout his career, the most outstanding being the Meritorious Civilian Service Award. Upon his retirement, Mr. Bland was the first civilian in Columbus, Ohio, to receive a Flag of the United States of America which was flown over the U.S. capital on the date of his retirement, March 3, 1990. He has been recognized for his contributions and achievements by being included in the *Who's Who Among Blacks in America*, 1975-76 and

also *The Men of Achievement*, 1977.

With respect to his pilot training, Bland says, "You almost had to be superman. A lot of blacks got washed-out that were damn good pilots; better than some of the whites that passed. This made the Tuskegee Airmen the 'cream of the crop.'"

I am proud to say that I have known Arthur H. "Art" Bland, for over ten years and I consider him to be a close friend. I also believe that based not only on his Tuskegee experience and his career achievements, but also on his honesty, integrity, and dedication to the United States, Art is still the "cream of the crop." ☼

("ANNEX" from page 10)

the entrance to Hangar 1. Donated to the Museum by the McDonnell Aircraft Company, it served well to sell the aircraft in the early days of the F-15 development effort.

Rockets, which have been around longer than virtually any other aspect of aviation and space flight, come in two basic types, with liquid or solid propellant motors. In order to accommodate the various compromises needed among payload weight, desired range/orbital altitude, and the permissible physical size of rocket motors, it may be necessary to have several motors fired at different stages of flight. The Minuteman ICBM has three such motors, one of which rests at the rear of Hangar 9. It is the second stage motor from a Minuteman III and delivers 60,600 pounds of thrust.

Turbojets are represented in Hangar 1 by a nice cutaway of the General Electric J-73-GE-3E, with its 12 stage axial compressor and 2 stage axial turbine. This engine, which produced 8,920 pounds of thrust, powered the F-86H, upgrading it over previous models with the J-47.

Three examples of air traffic control equipment include a mobile control tower, a ground control approach (GCA) facility, and its accompanying precision approach radar (PAR). The MRN-12 was the first mobile control tower built for and used by the USAF during the three decades of the 1950s, 60s, and 70s. Several were put to good use in Vietnam. They were completely self-contained and trailer-mounted. The CPN-4 was a ground control approach air traffic facility which picked up

aircraft out to 45 miles and directed their approach to the runway until within range of the FPN-16 precision approach radar. Under PAR control, aircraft could be "talked down" to the end of the runway. The item on display was actually used at Wright-Patterson AFB from 1952 till 1978. Both the GCA and PAR equipment were self-contained and trailer mounted.

Many people believe a Museum is a static display, where the same artifacts sit, gathering dust, forever. Nothing could be further from the truth for the discriminating visitor to the Air Force Museum, particularly at the Annex. Chances are, next time you visit or send your friends here, the display will be different from that described in this article! ☼

("FT KAM" from page 35)

Geiger was involved in a mid-air collision with Maj. Horace Meek Hickam over Langley Field, Virginia. Both parachuted from their damaged planes.

One year later Hickam met his

death in an airplane crash at Fort Crockett, Texas. Harold Geiger died on May 17, 1927, when the motor quit on his World War I-era DH-4B plane near Middletown, Pennsylvania.

These two aerial pioneers are today remembered by the air bases bearing their names—Hickam Field in Hawaii, and Geiger Field in Washington. ☼