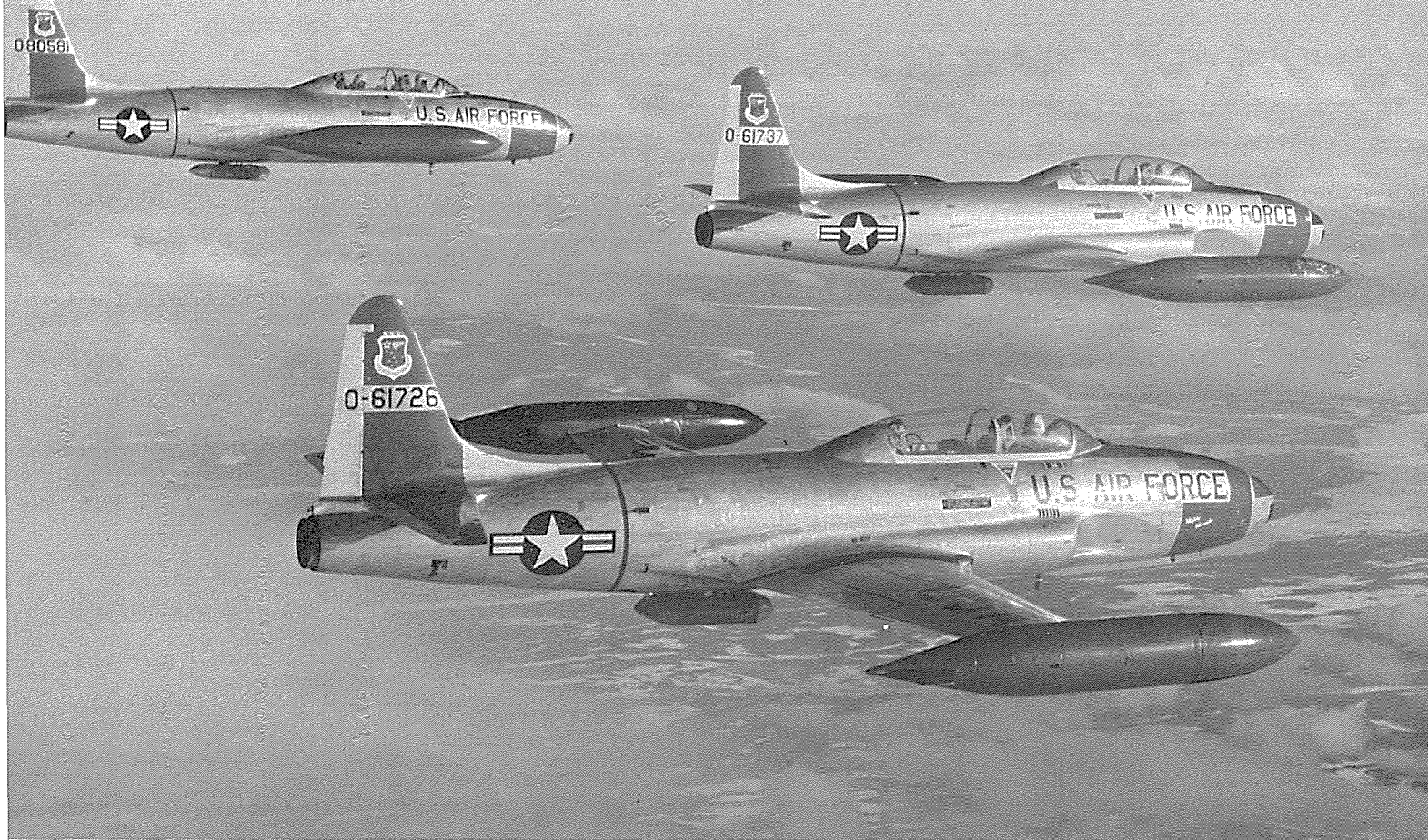




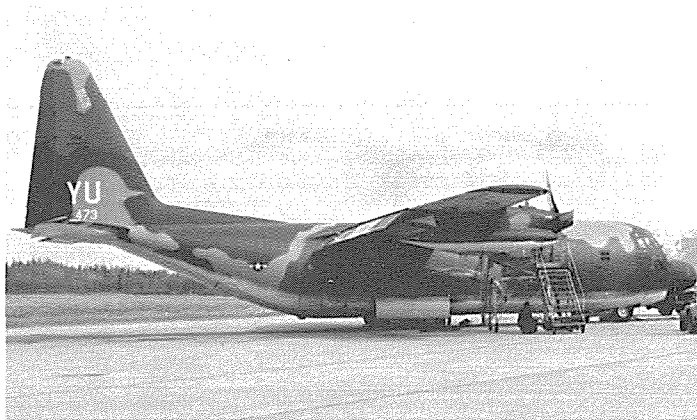
ALASKA AIR DEVELOPMENTS

By ALBERT C. PICCIRILLO

The State of Alaska is a vast land of mountains, forest, rivers, and the great permafrost territory to the north of the Arctic Circle. It forms a large part of the segment of the defense line, along with Canada's cooperation, which screens the United States from the rest of the world across the North Pole. It also has formed one of the links in the chain of air routes to and from the Far East, and as a consequence has seen many thousands of aircraft, some only fleetingly, as they passed through on their way to the Aleutians, Okinawa and South Vietnam.

Above, T-33A's of 21st Composite Wing. Soldiering on into the 1970s the old T-Birds are used to provide simulated target force for interceptor training as well as for radar calibration of ground sites. In foreground is MIGHTY MOSQUITO (painted on nose) with Outstanding Unit Award. AAC emblem is on right side of fin, 21st Comp. Wing emblem on left side. (Photo — Sgt. George Holland, USAF)





Upper left, a ski-equipped C-130D, 57-0494, of 17th Tactical Airlift Sqdn, August 1970. Red Arctic markings, black propeller spinners, 17th TAS emblem, red bird on white disc, on nose. Upper left, C-130A-LM of same 17th TAS, still in camouflage and with tail code of former 474th TAW.

Left, C-124C, 51-0098, of 17th TAS used to supply remote Alaskan bases, had transferred from MAC to AAC in December 1969. Right, nearly as old, a C-123B of 21st Air Base Group, with grey finish overall and red Arctic markings. (Photos — by author)

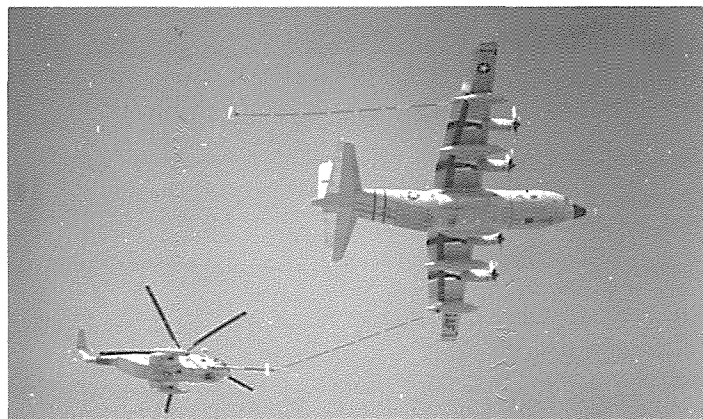
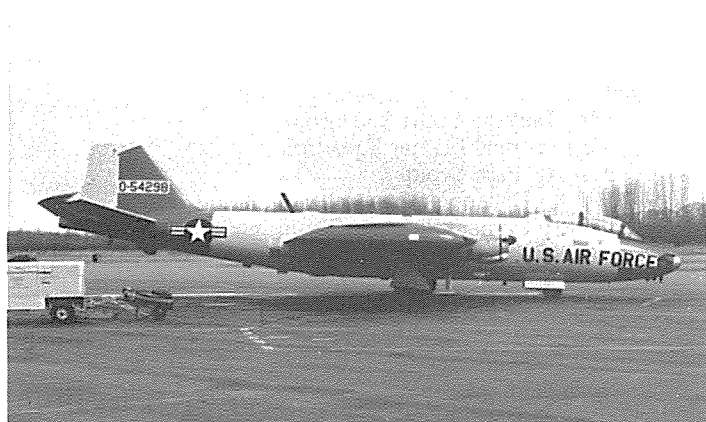
The operation of aircraft, and particularly military aircraft, in the Far North, requires the closest attention to detail, for landing fields are few and more often than not shrouded by the changing weather. The author has had the opportunity, in the past three years, to see what is perhaps the period of greatest change, at least in recent history, of the Alaska Air Command equipment. Old types have been phased out and replaced either by new air-

craft or by types new to the Command though they may have served long elsewhere. This photographic essay presents a few of the more interesting.

In the airlift sphere of interest the elderly C-47's and C-54's assigned to the 21st Composite Wing were replaced by C-123Bs in July 1969. Then in December 1969, the 21st Composite Wing's 17th Tactical Airlift Squadron received C-124's which it now

T-39A military executive transport, 52-4479, of the 21st Air Base Group at Elmendorf AFB, 1971. Colors are white upper surfaces, grey lower, gold and blue separation stripe. Alaska Air Command Emblem on fin. (Photo — USAF, courtesy of author)





Top left, the EB-57E-MA, 55-4298, of 21st Air Base Gp. provides training for all weather fighter aircrews and ground radar sites. Finish is grey with red Arctic markings. Top right, F-4E of 43rd TFS, assigned to the Alaska Air Command in July 1970 from McDill Field, where it had been

operates in addition to the only remaining C-130D's in the USAF. The C-130D's can be fitted with retractable skis and are used for logistic support of the Distant Early Warning (DEW) radar sites on the ice cap. They also supply the Navy installation on Fletcher Ice Island, known as T-3. This ice island floats only a few hundred miles from the North Pole and is the location of many advanced Arctic research projects.

a training unit. No. 68-483 has the squadron emblem on air intake, fin tip is medium blue. Left, the C-5A of 437th MAW from Charleston AFB, passing through Elmendorf, Jan. 1970. Right, refueling the HH-3E from an HC-130H of 71st ARRS over Elmendorf AFB May 1971.

Alaska ANG operates the only C-123J's in the active inventory so far as is known. These can also be fitted with retractable skis, and along with the AAC C-123B's, C-124's and C-130's, are used to supply the large number of remote Alaskan radar sites. Most of these sites have only primitive dirt (ice) airstrips and no all-weather instrument approaches. Getting in and out with a large airplane can be more than a little "hairy."

The first HH-3E to arrive in Alaska, 27 April 1970, ferried from Sikorsky plant in 35 hours. 69-5800 of 5040th Helicopter Sqdn. Colors, grey, with red Arctic markings. Equipped for aerial refueling, based at Elmendorf. (Photo — USAF, courtesy of author)





In general, the Alaskan-based USAF units compose the following command structure:

Alaska Air Command

21st Composite Wing, Elmendorf AFB

17th Tactical Airlift Squadron

43rd Tactical Fighter Squadron

21st Air Base Group

5040th Helicopter Squadron

5010th Combat Support Group, Eielson AFB

Alaska Air National Guard

176th Tactical Airlift Group, Kulik Field, Anchorage

144th Tactical Airlift Squadron

Strategic Air Command

6th Strategic Wing, Eielson AFB

Military Airlift Command

Air Rescue and Recovery Service

71st Air Rescue & Recovery Squadron, Elmendorf AFB

Detachment 3 of the 25th Air Division, Elmendorf AFB, was deactivated in October 1970. It had been part of the Aerospace Defense Command.

The veteran Convair F-102, operational in Alaska since September 1957, was finally phased out of the AAC inventory when the "Duce"-equipped 317th Fighter Interceptor Squadron was deactivated. In December 1969, 26 F-102As were ferried back to the "Lower 48." These F-102As were transferred to the 176th FIS, Wisconsin ANG, at Madison and the 111th FIS, 147th Fighter Group, Texas ANG, at Ellington AFB.

One F-102A which will permanently remain in Alaska can be viewed at the Transportation Museum at Anchorage International Airport. F-102A-65-CO, 56-1282 was towed from Elmendorf AFB across the city of Anchorage to the museum in December 1969. It was presented to the Museum by Major General Joseph A. Cunningham and carries the operational markings of the 317th.

AAC fighter forces had been augmented by F-106's of the Aerospace Defense Command (ADC) since 1963. Airplanes and their pilots were assigned on a temporary duty basis from various squadrons in ADC, to Detachment 3 of the 25th Air Division at Elmendorf AFB. The deactivation of Detachment 3 on 2 October 1970 finally ended the F-106's mission in Alaska after six and one half years. The last ADC F-106 squadron on temporary duty with Detachment 3 in Alaska was the 84th FIS, whose home base was Hamilton AFB, California.

The F-4E equipped 43rd Tactical Fighter Squadron (TFS) is now the AAC fighter force. The 43rd TFS deployed from MacDill AFB, Florida, to Elmendorf AFB on 23 June 1970, transferring from Tactical Air Command's 15th Tactical Fighter Wing to AAC's 21st Composite Wing. The non-stop deployment, using enroute aerial refueling provided by Strategic Air Command (SAC) KC-135A tankers, covered a distance of 4400 miles in slightly more than 7½ hours.

The versatile F-4E, in addition to providing air defense forces for the Alaska NORAD Region, provides tactical air support for U.S. Army Alaska (USARAL). Air refueling support for the F-4Es in Alaska comes from the KC-135As of the 6th Strategic Wing (SAC), based at Eielson AFB, near Fairbanks. F-4Es are maintained on an advanced state of alert at the AAC Forward Operating Bases (FOBs). These FOBs are Eielson AFB, Galena AFS, and King Salmon Airport.

In April 1970 the 5040th Helicopter Squadron received its first

Top, the U-6A in natural finish with red Arctic markings, moored at Elmendorf AFB. 52-6105 of 21st Air Base Gp., June 1970. Next, the HC-130H, of 71st ARRS, based at Elmendorf under 21st Comp. Wing but marked Military Airlift Command, August 1971. The C-123J is of the 176th TAG, Alaska Air Guard, from Kulik ANG Base near Anchorage, in October 1970. (Photos by author) Below, deicing spray being applied to a C-141A at Elmendorf. MAC used Elmendorf as one of the key bases in Operation Combat Pacer, several hundred C-141's passing through each month. (Photo— USAF, via author)

HH-3E, which have air refueling capability. These replaced the HH-21B's which continued on only during the Summer of 1970. May 1970 witnessed the assignment of the first specialized air rescue aircraft, the HC-130, to the newly activated 71st Air Rescue and Recovery Squadron at Elmendorf AFB. The HC-130's act as aerial tankers for the HH-3Es.

For the past four winters WC-130E airplanes of the 54th Weather Reconnaissance Squadron have been flown in from Anderson AFB, Guam, for temporary duty in *Project Cold Cowl* at Elmendorf AFB. From November 15 to February 15 each year the WC-130E's were used in a fog dispersal program which, since 1967, have resulted in over 1100 takeoffs and landings at Elmendorf that would otherwise have to be diverted because of fog.

The super-cooled fog surrounding Elmendorf is actually composed of tiny water droplets, not frozen but suspended in the atmosphere at temperatures well below freezing. In practice, as the special WC-130's were flown over the fog, dry ice is dropped and as it falls through the fog, it collects the tiny water droplets, forming snowflakes which then drop to the ground, leaving the air cleared, a process that takes from 45 minutes to an hour to effect. At the end of that time there is a large hole in the fog layer, hopefully over the approach end of the primary instrument runway at Elmendorf.

In order to make sure that the hole in the fog layer is in the correct place, weathermen must first carefully determine the direction and velocity of the wind at various altitudes. If there is no circulation to blow in more fog, the effect of the dry ice can last as long as ten hours.

Each pilot flying on the Project Cold Cowl missions underwent special instrument flight training, since much of the time the missions were flown under zero visibility conditions and at altitudes below those normally used in instrument flying. Takeoffs were usually accomplished totally by instruments.

Once the WC-130E was airborne and flying on top of the fog layer, meteorologists determined where the ice should be dropped in order to place the cleared area over the runway. A special dispenser in the rear of the airplane fed the dry ice in a fine spray out of a chute in the bottom of the fuselage during four to six passes, each one being four miles long and one-half mile distant and parallel to the last pass. About eight pounds of dry ice were dropped per mile of flight.

Although Project Cold Cowl was very successful, it has now been supplanted at Elmendorf by a ground-based system of 18 propane gas burners. This system is less expensive, and takes less time to place in operation.

The present equipment of the Alaska-based air units is:

17th Tactical Airlift Squadron: C-124C, C-130D

43rd TFS: F-4E

21st Air Base Gp: C-118A, C-123B, T-33A, T-39A, U-6A, EB-57E

5040th Helicopter Sqdn: HH-3E

5010th Combat Supt. Gp: T-33A, C-123B

176th Tactical airlift Gp: U-3A, C-54

144th Tactical Airlift Sqdn: C-123J

6th Strategic Wing: KC-135A

71st Air Rescue & Recovery Sqdn: HC-130P

The Army, Navy, and Coast Guard aircraft based in Alaska will be featured in a subsequent article along with the TAC, ANG and AF Reserve aircraft on joint training exercises.

Top, an 84th FIS F-106A from Hamilton AFB was on TDY to Detachment 3, 25th Air Division at Elmendorf in September 1970. Det. 3 is now phased out. Next, the HH-21B, now replaced by the HH-3A in the 5040th Helicopter Sq. shown here with Outstanding Unit Award emblem, red fuselage bands, and 21st Comp. Wing emblem on tail. C-54D, 21st Comp. Wing, retired 1969. TF-102A, 56-2330, of 317th FIS now deactivated. F-102A's went to ANG units in late 1969. While in AAC it had 21st Comp. Wing emblem on left side of fin, red Arctic markings, yellow wing fences. (Photos — USAF)

