54 WEATHER RECONNAISSANCE SQUADRON

MISSION

LINEAGE
654 Bombardment Squadron (Heavy, Reconnaissance, Special), constituted 17 Jul 1944 Activated, 9 Aug 1944
Redesignated 54 Reconnaissance Squadron (Long Range, Weather), 4 Sep 1945
Redesignated 54 Reconnaissance Squadron (Very Long Range, Weather), 27 Nov 1945
Inactivated, 15 Oct 1947
Redesignated 54 Strategic Reconnaissance Squadron (Medium, Weather), 22 Jan 1951
Activated, 21 Feb 1951
Redesignated 54 Weather Reconnaissance Squadron, 15 Feb 1954
Discontinued, 18 Mar 1960
Organized, 18 Apr 1962
Inactivated, 30 Sep 1987

STATIONS
Watton, England, 9 Aug 1944-25 Ju1 1945
Drew Field, FL, 6 Aug 1945
Guam, 27 Nov 1945
Buckley Field, CO, 28 Feb 1946
Langley Field, VA, 2 Jun 1946
Morrison Field, FL, 19 Jul 1946-11 Jun 1947
North AB, Guam, 7 Jul-15 Oct 1947
Andersen AFB, Guam, 21 Feb 1951-18 Mar 1960
Andersen AFB, Guam, 18 Apr 1962-30 Sep 1987

ASSIGNMENTS

25 Bombardment Group (Reconnaissance), 9 Aug 1944
Third Air Force, 8 Sep 1945
311 Reconnaissance Wing, 27 Nov 1945
Air Weather Service, 13 Mar 1946
43 Weather Wing, 1 Aug-15 Oct 1947
2143 Air Weather Wing, 21 Feb 1951
1 Weather Wing, 8 Feb 1954
Department of the Air Force, 18 Mar 1960
Military Air Transport Service, 8 Feb 1962
9 Weather Reconnaissance Group, 18 Apr 1962
9 Weather Reconnaissance Wing, 8 Jul 1965
41 Rescue and Weather Reconnaissance Wing, 1 Sep 1975-30 Sep 1987

ATTACHMENTS
Twentieth Air Force, 8 Dec 1945-28 Feb 1946

WEAPON SYSTEMS
B-25, 1944
Mosquito XVI, 1944-1945
B-26, 1944-1945
P-38, 1944-1945
B-29, 19461947
C-47, 1946-1947
WB-29, 1951-1956
C-54, 1951-1960
YC-97, 1952-1953
TB-50, 1955
WB-50, 1955-1960
WB-50
RB-57
C-130, 1962
WC-130, 1965-1987

COMMANDERS
Maj John Larkin, 9 Aug 44
Maj Willis D. Locke, 8 Jan 45
Maj Robert P. Howle, Apr 45
Capt Willard Blackwell, Unknown
1Lt Leo C. Stewart, Jr., 7 Jan 1946
Capt Richard Shine, 10 Jan 1946
Capt R. H. Murray, 15, Aug 1946
Capt William S. Barney, 6 Sep 1946
Maj Harold W. Richardson, 10 Sep 1946
Lt Col Roy W. Nelson, Jr., 16 Sep 1946

Maj William S. Barney, 25 Feb 1947
Lt Col Roy W. Nelson, Jr., 25 Mar 1947
Lt Col Paul S. Bechtel, 21 Feb 1951
Lt Col Roger A. Stevenson, 17 Jun 1952
Lt Col Griffin H. Wood, 6 Aug 1954
Lt Col Howard L. Berg, 7 Apr 1956
Lt Col Dale D. Desper, 4 Apr 1958
Lt Col Eugene Wernette, 18 Apr 1962
Lt Col Frank Remmele, 13 May 1964
Lt Col William Rankin, 26 Jun 1964
Lt Col George Podwolsky, 18 Jun 1966
Col Robert Kane, 26 Jun 1966
Lt Col Arthur Weaver, 1 Jun 1967
Col Carl Gunderson, Jr., 1 Jul 1969
Lt Col Allen Weeks, 15 Aug 1970
Col Douglas Campbell, 2 Aug 1971
Lt Col Merle Nelson, 25 Mar 1972
Lt Col Leo Rice, 23 Jun 1972
Col Franklin Ross, 28 Jun 1972
Maj Charles Conover, 4 Aug 1975
Col Foster A. Post, 7 Aug 1975

HONORS
Service Streamers
Asiatic-Pacific Theater
Korean Theater

Campaign Streamers
Northern France
Rhineland
Ardennes-Alsace
Central Europe
Air Combat, EAME Theater

Armed Forces Expeditionary Streamers

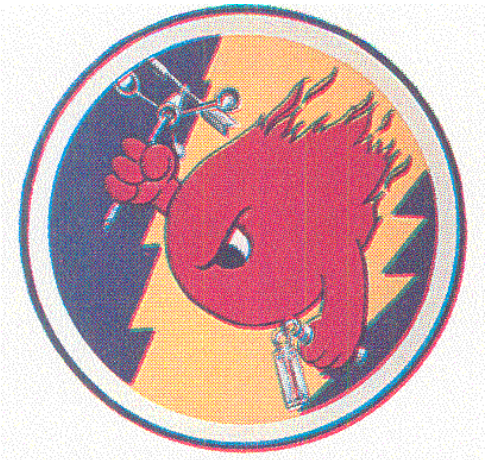
Decorations
Air Force Outstanding Unit Award
Mar-Oct 1956

1 Jul 1967-30 Jun 1968
1 Jan-31 Dec 1971
1 Jan 1975-31 May 1976
1 Sep 1975-1 May 1977

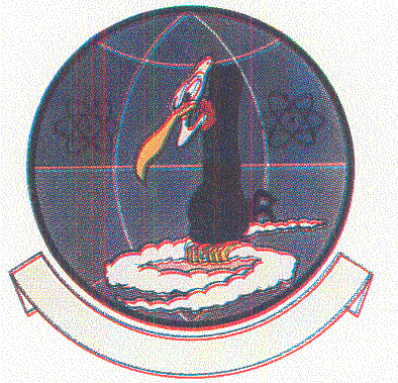
16 Jul 1977-16 Jul 1979

EMBLEM

654 Bombardment Squadron (Heavy, Reconnaissance, Special) emblem: over and through an ultramarine blue disc, with border equally divided white and dark read, a stylized black bat with red mouth and eyes, affronte, holding a black aerial camera with the right foot and black flash bomb with the left foot, all outlined white as per record drawing. **SIGNIFCANCE:** The black bat carrying the camera and flash bomb symbolizes the squadron primary mission of night photographic reconnaissance. (Approved, 23 Oct 1944)



54 Strategic Reconnaissance Squadron (Medium, Weather) emblem: On a blue disc, edged white and blue a representation of a broad light flash with forked edges, yellow, starting from upper left [sinister] to lower right [dexter]; thereon a stylized “fireball” red, moving downward, holding in the right hand a wind instrument and in the left hand a thermometer all gray. The stylized "fireball", nickname synonymous with the unit, symbolizes the high spirit and determination of the 54 Strategic Reconnaissance Squadron (Medium) Weather. The wind instrument and thermometer are instruments used in carrying out the mission of the unit. The sky and the light flash symbolize where the mission is performed. (Approved, 10 Aug 1951)



54 Weather Reconnaissance Squadron emblem: The globe represents the base area covered by

the squadron's activities, the vulture being the bird name slotted to it by the Air Weather Service, bird names being used as squadron designators. The vulture, in having patience and an extremely keen eye, can spot its objective from extremely high altitudes and can also fly for long periods of time. Standing on a cloud which represents a typhoon, the vulture alludes to the squadron's weather and storm reconnaissance mission. The two atom symbols refer to the squadron's participation in such advanced projects as aerial sampling, Dominic, Mercury, Discoverer, and other similar projects which may be assigned (Approved, 9 Jul 1963)

54 Weather Reconnaissance Squadron emblem: The emblem is symbolic of the unit and the Air Force colors of ultramarine blue and golden yellow are used in the design. The color blue alludes to the sky, the primary theater of Air Force operations, and yellow to the sun and excellence of personnel is assigned tasks. The international symbol for cyclone is superimposed on the disc. In the center of the cyclone is the likeness of the Australian Black Swan. The large and strikingly beautiful waterfowl is a native of Australia and the Pacific world. It also represents the weather track designator, the airborne call sign (weatherbird) as well as the squadron (i.e., Swan Birds). As a native of the Pacific, the swan also represents the location of the unit. The bird's plumage is black, representing the dark, rain-soaked clouds that often make up the wall cloud of a fully developed typhoon. The placement of the swan in the center of the cyclone symbol represents the location in the "eye" of a storm from which the aerial weather observations are performed. (Approved, 29 Nov 1973)

SIGNIFICANCE: The emblem is symbolic of the unit and the Air Force colors, ultramarine blue and golden yellow, are used in the design. The color blue alludes to the sky, the primary theater of Air Force operations, and yellow to the sun and excellence of personnel in assigned tasks. The international symbol for cyclones is superimposed on the disc. In the center of the cyclone is the likeness of the Australian Black Swan. This large and strikingly beautiful waterfowl is a native of Australia and the Pacific world. It also represents the weather track designators, the airborne call sign (weatherbird) as well as the squadron aircraft (i.e., Swan Birds). As a native of the Pacific, the swan also represents the location of the unit. The bird's plumage is black, representing the dark, rain-soaked clouds that often make up the wall cloud of a fully developed typhoon. The placement of the swan in the center of the cyclone symbol represents the location in the "eye" of

a storm from which the aerial weather observations are performed.

On a blue disc edged with a narrow yellow border, a yellow cyclone symbol throughout surmounted by a stylized Australian Black Swan garnished yellow. Attached above the disc a blank yellow scroll. Attached below the disc a yellow scroll inscribed "Typhoon Chasers" in blue letters.

MOTTO
TYPHOON CHASERS

OPERATIONS
Photographic and weather reconnaissance in ETO, 9 Aug 1944-4 May 1945.

Weather reconnaissance in support of the Korean War.

Another vital role filled by the Hercules is weather reconnaissance, which was started when five WC-130Bs entered service in 1964 with the 54 Weather Reconnaissance Squadron (WRS). These were supplemented with three newly converted WC-130Es in 1965.

In 1967, based on tests conducted by the Defense Department and the Navy over Laos the previous year, AWS was assigned three WC-130s specifically for conducting rainmaking operations over portions of the Ho Chi Minn Trail winding from North Vietnam through Laos and Cambodia into South Vietnam. The theory went that, if the normal monsoon season (particularly the southwest monsoon) could be extended, the resultant mud from increased rainfall on the main lines of communication from North Vietnam would measurably reduce the flow of men and materiel to the enemy.

The WC-130s and crews utilized were assigned permanently to AWS' 54 Weather Reconnaissance Squadron at Andersen AFB, Guam, From there they were rotated (one WC-130 was rotated about every 20 days) to, and operated from Udorn Air Base, Thailand, While at Udorn, the aircraft and crews were assigned temporarily and administratively to the 1st Weather Group's Operating Location 2, and came under the operational control of Seventh Air Force—actually, the 1st Weather Group commander, wearing his Seventh Air Force staff weather officer "hat." Evidently because ramp space, maintenance and living facilities were at a premium, no more than two WC-130s and 50 men were permitted at Udorn simultaneously. Carrying flare racks capable of dispensing 104 silver or lead iodide flares (a 40 millimeter aluminum photoflash-type cartridge with primer and a candle assembly), the WC-130s were expected to generate at least one sortie per day, or approximately 220 hours per month. Cloud seeding sorties were flown at the freezing level, which was generally about 18,000 feet. Two RF-4Cs based at Udorn were also specially configured and used on the rainmaking project—they could carry 104 flares in their photo cartridge compartments—and were also expected to maintain a sortie rate of one per day.

The first operational rainmaking missions were flown it; under a project labeled variously as Popeye, Intermediary, and, by AWS, Motorpool. Some 591 rainmaking sorties unarmed and

unescorted WC-130s and RF-4Cs in 1967, and 737 in 1968 (during which 6,570 flares were expended in 1967, and 7,420 in 1968) over Laos, North Vietnam and, specifically, the A Shau Valley. Particularly, during the Tet offensive, AWS WC-130s were flown on 47, 34, 31, 30, and 33 rainmaking sorties in the months of January through May 1968, respectively. During those missions the WC-130 crews also made occasional dropsonde releases and relayed both vertical and horizontal observation data in the clear to the 1st Weather Group's weather center at Tan Son Nhut, Detachment 14.

General Westmoreland was one of only four general officers in Southeast Asia during the Tet offensive who were privy to the details of the tightly controlled rainmaking missions, and in memoirs he published in 1976 he asserted that the operation resulted in "no appreciable increase" in rain over the Ho Chi Minn Trail. One of the project's most difficult aspects was quantitatively determining how much, if any, additional rain fell over and above the climatological average to be expected. Using empirical and theoretical techniques, it was estimated by experts that rainfall was increased in limited areas up to thirty percent and, subjectively, that it contributed to slowing the enemy's flow of supplies into South Vietnam along the trail. Not only that, but at a cost of $3.6 million annually, rainmaking was less costly than traditional air interdiction methods, more important, it was More humane because it saved lives.

The very nature of the project led it to be cloaked with an armor of secrecy, and raised interesting possibilities. The few civilian officials in the State and Defense Departments with access to the project considered it extremely sensitive politically. The potential existed for disrupting the area's delicate ecological balance The international legal implications were staggering if Thailand, for instance, alleged that its rice paddies were unlawfully denied the water precipitated over Laos by the operation—a form of aerial riparian rights. The governments of Thailand, Laos, and South Vietnam were not informed about the operation, nor were the American ambassadors to those countries. General Westmoreland and his deputy at USMACV for Intelligence knew, as did the Seventh Air Force commander, General William W. Momyer, and his deputy for Intelligence.

USAF Unit Histories
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Sources
Air Force Historical Research Agency. U.S. Air Force. Maxwell AFB, AL.
The Institute of Heraldry. U.S. Army. Fort Belvoir, VA.