

# 62<sup>nd</sup> EXPEDITIONARY RECONNAISSANCE SQUADRON



## MISSION

### LINEAGE

382<sup>nd</sup> Fighter Squadron (Single Engine) constituted, 11 Feb 1943

Activated, 1 Mar 1943

Redesignated 362<sup>nd</sup> Fighter Squadron, Single Engine, 20 Aug 1943

Redesignated 162<sup>nd</sup> Tactical Reconnaissance Squadron, 25 Aug 1944

Inactivated, 3 Feb 1946

Redesignated 162<sup>nd</sup> Reconnaissance Squadron, Night Photographic, 9 Jul 1946

Activated, 29 Jul 1946

Redesignated 162<sup>nd</sup> Tactical Reconnaissance Squadron, Night Photographic, 14 Jun 1948

Inactivated, 25 Feb 1951

Redesignated 62<sup>nd</sup> Tactical Reconnaissance Squadron, 12 May 1971

Activated, 15 Oct 1971

Redesignated 62<sup>nd</sup> Tactical Reconnaissance Training Squadron, 1 Jul 1982

Inactivated, 31 Dec 1989

Redesignated 62<sup>nd</sup> Expeditionary Reconnaissance Squadron and converted to provisional status,  
26 Feb 2003

### STATIONS

Hamilton Field, CA, 1 Mar 1943

Santa Rosa AAFld, CA, 23 Aug 1943

Hayward AAFld, CA, 4 Oct-2 Dec 1943

Keevil, England, 23 Dec 1943

Rivenhall, England, 22 Jan 1944  
Staplehurst, England, 14 Apr 1944  
Maupertus, France, 3 Jul 1944  
Azeville, France, 23 Aug 1944  
Montreuil, France, 13 Sep 1944  
Dijon, France, 24 Sep 1944  
Azelot, France, 2 Nov 1944  
Haguenau, France, 31 Mar 1945  
Wiesbaden, Germany, 21 Apr 1945  
Furth, Germany, 26 Apr 1945  
Reims, France, c. 24 Jun-Jul 1945  
Drew Field, FL, 3 Aug 1945  
MacDill Field, FL, 21 Dec 1945-3 Feb 1946  
Brooks Field, TX, 29 Jul 1946  
Langley Field, VA, 20 Dec 1946-28 Jul 1950  
Itazuke AB, Japan, 18 Aug 1950  
Taegu AB, South Korea, 8 Oct 1950  
Komaki AB, Japan, 26 Jan-25 Feb 1951  
Shaw AFB, SC, 15 Oct 1971  
Bergstrom AFB, TX, 1 Jul 1982-31 Dec 1989

#### **DEPLOYED STATIONS**

RAF Alconbury, England, 5-24 Mar 1976, 24 Jul-24 Aug 1979, 20 May-22 Jun 1982  
RAF Coltishall, England, 12-26 Jun 1978

#### **ASSIGNMENTS**

363<sup>rd</sup> Fighter (later, 363<sup>rd</sup> Tactical Reconnaissance) Group, 1 Mar 1943  
XII Tactical Air Command, 29 Sep 1944  
Ninth Air Force, 15 Nov 1944  
XIX Tactical Air Command, 21 Apr 1945  
10<sup>th</sup> Photographic (later, 10<sup>th</sup> Reconnaissance) Group, 25 Apr 1945  
United States Strategic Air Forces in Europe, 24 Jun 1945  
Third Air Force, 3 Aug 1945-3 Feb 1946  
363<sup>rd</sup> Reconnaissance (later, 363 [s Tactical Reconnaissance) Group, 29 Jul 1946  
543 Tactical Support Group, 10 Oct 1950-25 Feb 1951  
363 Tactical Reconnaissance (later, 363 Tactical Fighter) Wing, 15 Oct 1971  
67 Tactical Reconnaissance Wing, 1 Jul 1982-31 Dec 1989  
Air Combat Command to activate or inactivate at any time after 26 Feb 2003

#### **ATTACHMENTS**

Reconnaissance Group [Provisional], XII Tactical Air Command, 16 Oct 1944-21 Apr 1945  
9 Reconnaissance Group [Provisional], 21 Apr 1945  
10 Photographic Group, 22-25 Apr 1945  
Fifth Air Force, 18 Aug-26 Sep 1950

543 Tactical Support Group, 26 Sep-10 Oct 1950

10 Tactical Reconnaissance Wing, 5-24 Mar 1976, 12-26 Jul 1978, 24 Jul-24 Aug 1979, 20 May-22 Jun 1982

### **WEAPON SYSTEMS**

P-39, 1943

P-51, 1944-1945

F-6, 1944-1945

F-6, 1946

P-39N

P-39Q

P-51B

P-51C

F-6D

F-6C

P-51D



162 TRS RB-26C

FA (later, RB)-26, 1946-1951

RF-4, 1971-1989

RF-4C

B-57, 1971-1976

### **COMMANDERS**

Maj Robert C. McWherter, 30 May 1943

Cpt Robert B. McGee, 25 Aug 1944

Cpt Douglas H. Buskey, 27 Aug 1944

LTC Robert S. Ware, 31 Aug 1944-1945

Maj Merritt G. Garner, 29 Jul 1946  
LTC Edwin A. Russell Jr., 1947  
LTC W. Trippet, #1948  
Maj Victor N. Cabas, Aug 1948  
LTC Walter W. Berg, 16 Oct 1948  
Maj Victor Cabas, Feb 1949  
LTC Walter W. Berg, May 1949



LTC Frank A. Sharp, 1950-1951

LTC Lewis S. Andrews III, 15 Oct 1971  
LTC James D. McNicholas, 29 Feb 1972  
LTC Gale L. Hearn, 25 Oct 1972  
LTC Scott M. Schoolfield, 20 Jul 1973  
LTC George M. Bernert, 1 Jul 1975  
LTC Michael D. Pavich, 4 May 1977  
LTC Ralph W. Holm, 30 Jun 1978  
LTC Hiller P. McCartin Jr., 15 Nov 1979  
LTC Robert M. Penny, 14 Dec 1981  
LTC Glyndon A. Bruhl, 1 Jul 1982  
LTC John D. Petersen, 2 Sep 1983  
LTC Dale O. Haselhorst, 17 Dec 1984  
LTC Larry W. Black, 19 Dec 1986  
LTC Louis D. Braun III, 2 Dec 1988-31 Dec 1989

## **HONORS**

### **Service Streamers**

World War II American Theater

### **Campaign Streamers**

World War II  
Air Offensive, Europe  
Normandy  
Northern France  
Rhineland  
Ardennes-Alsace  
Central Europe  
Air Combat, EAME Theater

Korean War: UN Defensive  
UN Offensive  
CCF Intervention  
First UN Counteroffensive

**Armed Forces Expeditionary Streamers**

None

**Decorations**

Distinguished Unit Citation: Germany, 22-23 Feb 1945

Air Force Outstanding Unit Awards

1 Jul 1974-1 Jul 1976

2 Jul 1976-30 Jun 1978

1 Oct 1981-[30 Jun 1982]

[1 Jul] 1982-31 May 1983

1 Jun 1983-31 May 1984

1 Jan 1985-1 Feb 1986

Republic of Korea Presidential Unit Citation

[10-25 Feb 1951]

**EMBLEM**

162<sup>nd</sup> Tactical Reconnaissance Squadron, Night Photographic emblem: On a royal blue disc, an owl black, gray, and white, with yellow eyes and claws, in flight with wings-up-turned, having a yellow beam emanating from the eyes toward dexter base, holding in claws a black, gray, and white camera pointed toward dexter base. (Approved, 24 Feb 1949)



62<sup>nd</sup> Expeditionary Reconnaissance Squadron emblem: On a disc Azure, an owl Proper volant, wings upturned, claws and eyes Or, emanating from each eye toward dexter base a beam of the same, holding in its claws a camera pointing toward dexter base Sable, Silver Gray, and Argent, all within a narrow border Black. Attached below the disc, a Yellow scroll edged with a narrow Black border and inscribed "62D EXPEDITIONARY RECON SQ" in Black letters. **SIGNIFICANCE:** Ultramarine blue and Air Force yellow are the Air Force colors. Blue alludes to the sky, the primary theater of Air Force operations. Yellow refers to the sun and the excellence required of Air Force personnel. The owl, a legendary bird of prey with excellent eyesight, hearing, and intelligence, symbolizes the hunter-killer mission. It represents the unit's stealthy but lethal persistence over the battlefield, the capability to see the enemy even in the dark and the unit's precision striking ability. The beams of light emanating from the owl's eyes emphasize the unit's power to detect and observe the enemy and to illuminate it to others. The camera recalls the unit's long distinctive heritage as a reconnaissance squadron along with its ability to immediately relay vital intelligence. (Originally approved, 24 Feb 1949; newest rendition approved, 28 Jan 2009)

#### **MOTTO**

#### **NICKNAME**

#### **OPERATIONS**

Air defense within the United States until Nov 1943. Combat in European Theater of Operations, 24 Feb 1944-9 May 1945.

Combat in Korea, 25 Aug 1950-25 Feb 1951.

When alerted for overseas movement on 5 Jul 1950, the squadron was training in its mission of providing ground, air, and naval forces with visual and photographic intelligence concerning

the disposition, movement, and other activity of friendly and hostile forces during daylight and darkness.

The original movement orders placed the unit on temporary duty in excess of ninety days to Far East Air Force. The unit was to go into combat at full peacetime personnel authorization but short two aircraft.

Immediate steps were taken to fill the personnel vacancies. Of the 59 officers and 153 airmen who eventually went overseas with the unit, only 14 officers and 109 airmen were assigned when alert orders were received. Although the majority of the newly assigned personnel had not had previous reconnaissance experience, their service time was longer and their Air Force experience was more varied than average.

The flight echelon (sixteen RB-26C's) departed Langley Air Force Base 11 July for Hill Air Force Base, Ogden, Utah, where additional photo equipment was installed and the engines were changed. The surface-transported echelon left Langley Air Force Base on 28 July 1950 by troop train, and proceeded overseas on the USNS General Nelson M. Walker on 6 August, arriving at Yokohama 17 August.

The original destination had been Johnson Air Base but destination was changed to Iwakuni Air Base, then Itazuke Air Base. The surface-transported echelon arrived at Itazuke Air Base 19 August, joining the flight echelon there.

Actual night reconnaissance operations were begun the 26th of August. Weather permitting, between seven and ten missions were flown nightly, and missions exceeded 650 by 31 December 1950.

During September 1950 the squadron was based at Itazuke Air Base, Kyushu, Japan, and flew missions in support of operations in Korea. At this time, the unit was still assigned to the 363d Tactical Reconnaissance Group, Langley AFB, and attached for administrative and logistical support to 8th Fighter-Bomber Wing. Operational control was exercised by the Commanding General, Fifth Air Force.

On 8 October the squadron moved to Taegu Air Base, Korea, remaining operational throughout the move. Two days later the squadron was reassigned to 543 Tactical Support Group and the TDY orders were changed to permanent change of station orders. The squadron remained assigned to 543d Tac Spt Gp, stationed at Taegu Air Base for the remainder of the year.

The change to a PCS assignment was naturally a bitter pill, yet it was but a part of the necessary U. N. medicine. Now having a definite assignment as part of Fifth Air Force, the squadron assignment was soon augmented to a total of 56 officers and 234 airmen, although not all the vacancies were actually filled.

Squadron personnel became acclimated rapidly to the conditions of living in the field. Tent

quarters at Itazuke were no inconvenience, but the lack of adequate sanitary facilities caused considerable discomfort.

The discomforts at Itazuke seemed luxuries when compared with life in a Taegu rice paddy. However, within a month, squadron personnel were comfortably settled in newly constructed buildings, sanitary facilities were also improved as time went by.

The squadron was continually hampered by lack of heavy equipment, left behind in the United States in anticipation of movement by air, improvisation and gradual accrual by requisition helped this situation.

The quality of reconnaissance photos improved greatly as the minor technical problems were solved, A new camera mount, devised by Lt. Col. Sharp, practically eliminated picture fuzziness caused by vibration, making the photos much more valuable.

At years end the squadron had lost one officer, Lt. Stanley E. Wafle, killed in a night landing accident at Itazuke Air Base on 4 October 1950, His loss was felt keenly by all personnel.

Observations and photographs resulting from this squadron's reconnaissance operations provided a large part of the intelligence available to United Nations Forces on the movement of enemy forces, and the only available intelligence of night movements of the enemy, This intelligence became increasingly important as the campaign progressed because the enemy learned that it could be disastrous to move during daylight hours and restricted his movement to hours of darkness.

Evasive action and speed proved ample defense against the occasional ground fire encounters a circumstance for which the crews of our unarmed aircraft were grateful.



162<sup>nd</sup> TRS aircrew and ground crew.

As the new year began, combat crew members passed the fifty mission mark and looked forward hopefully to replacement and return to the United States. During the last week Of December,

twenty five new officers joined the squadron, assuring that the squadron's mission would be accomplished even though the personnel might change.

The 162<sup>nd</sup> TRS consists of several sections:

The personnel and administration section is concerned with people; their management, utilization, pay, medical care, and morale, This mission is implemented chiefly through the preparation and maintenance of pertinent records.

An air force based on machine techniques requires the services of men with varied and advanced skills and knowledge. It is the job of the Personnel Officer, 1st Lt. Noah J. Henson, and the Classification Clerk, S/Sgt. Jack Dobbins, to assure that these men are properly assigned, that their skills and knowledge are fully used, and that the way is clear for their advancement and increased usefulness to the Air Force.

The very important matter of pay for the troops is handled by Sgt. Manley E. Glaubitz, who also maintains the airmen's basic records. Sgt. Robert M. Chapman maintains the files of constantly changing directives and regulations and mimeographs the reams of forces and orders that are required. Cpl. Ronald C. Livingston, messenger and mail clerk, has the responsibility of distribution of official messages and personal mail, the latter being the greatest morale factor.

Cpl. Paul E. Ryan prepares the Morning Report, basic military record, and types correspondence and recommendations for awards and decorations. The First Sergeant, Charie E. Smith, keeps abreast of all events and knows the location and duty status of everyone in the squadron; he is the Commander's liaison with the airmen.

The Operations Section of the 162nd Tactical Reconnaissance Squadron (Night Photographic) can be compared to the hub of a wagon wheel. Combat orders received by this section are coordinated with all other sections necessary to completely carry out a Reconnaissance Photographic Mission.

Frag orders once received by Combat Intelligence Section are carefully read, and named targets are plotted on the Situation Map for use by the mission planning section who plots courses to and from target area.

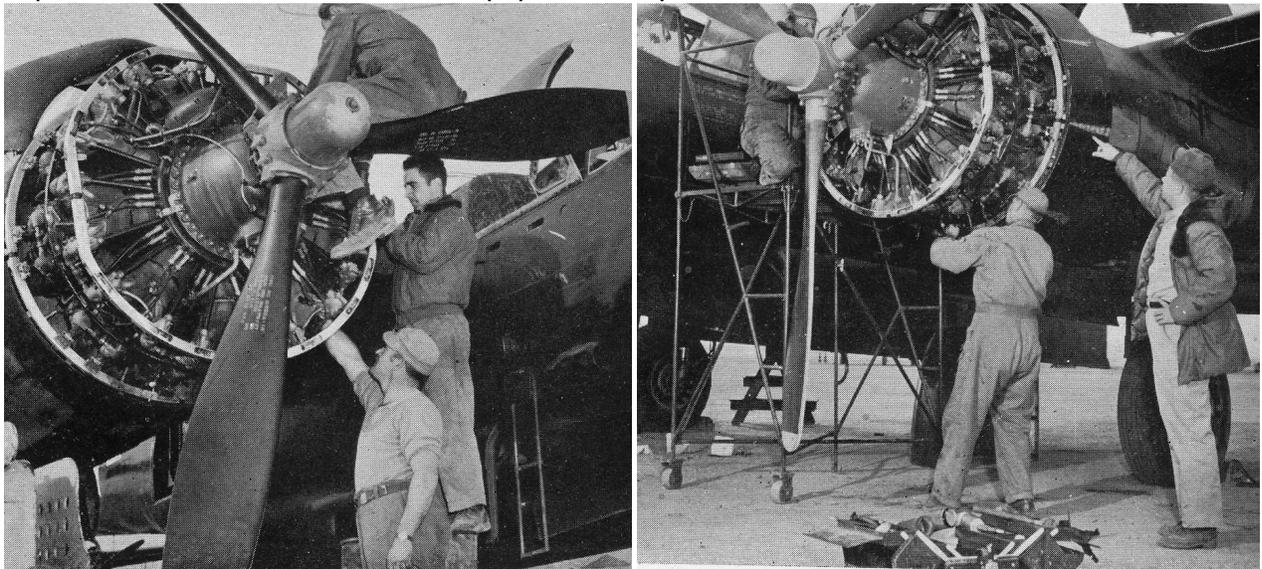
At the 1300 officers call crews are briefed by the Ground Liaison Officer, Squadron Intelligence Officer and Photo Interpreter. There the operations officer announces the schedule for the night.

During the remainder of the afternoon combat crews are briefed individually as to their assigned targets, bomb line changes, weather, escape and evasion for each sortie is different. A sortie is flown by a single aircraft, alone and unarmed, with take-off times varying from 1700 hours to 0400 hours the following morning.

This squadron has flown 614 sorties and massed 2,500 hours of combat flying time from August through December 1950

Engineering, the largest section functioning under the commander, provides for the upkeep of the aircraft. Here the aircraft are maintained by appropriate maintenance, repair, and replacements.

The mission of the organization is initiated at this point. The number of sorties is controlled by the availability of the aircraft, and the outcome of the mission is determined by the condition of the aircraft and the condition of the equipment installed. Highly specialized personnel are required to check and maintain the equipment daily.



162<sup>nd</sup> TRS engineering section RB-26C engine maintenance

Here duty has a habit of occurring twenty-four hours a day. Day crews prepare the aircraft for flight, and night crews are present to assist the aircraft and air crews off for flight and return.

The important function of supply, handled by Lt. Morgan and assisted by Lt. Kucinski, is important to the successful accomplishment of any squadrons final mission.

This section, divided into two branches, Tech and Quartermaster, receive and issues all aircraft parts, tools, equipment, clothing, organizational equipment, and general supplies. To the Quartermaster supply, the questions are always; "Do you have my size? To Tech supply. "Do you have those plugs?"

The never ending demands on the sections personnel, often extreme, are met with efficient service. Such as laundry, which not being able to rely on local facilities, is flown to and from a base in Japan. All members of Tech supply are capable of assisting maintenance personnel in searching catalogues for interchangeable parts, proper nomenclature, and parts number.

Vast strides in Night Photography have been made since its origin. Its primary function and tactical employment of catching the enemy totally unaware has been displayed many times and to great advantage for intelligence purposes. In attaining this goal, the Photographic Section plays a major role although it is the last section along the assembly line in forming the "Hub" in the wheel of successful reconnaissance.

Since there is no parallel between night and day photography, advanced techniques must be employed in order to produce night photos of top quality. This is accomplished through the untiring efforts of the laboratory personnel. When quality night photos can be produced that equal those of day time photos, the personnel of the laboratory can take pride in aiding in the defeat of the common enemy.

Due to the fact that this squadron performs night reconnaissance the Intelligence section is on duty round the clock.

During the day the intelligence personnel work in conjunction with the mission planning officer, who also performs the duty as assistant intelligence officer, they prepare the mission schedule, check the bomb line for changes, all targets are checked for erroneous coordinates, and forms pertaining to the coming night are made ready.

Though the hours may be long the night crew consisting of one officer and an airmen are always on hand to meet the returning crews and to record all sightings that are of military importance, the information is then relayed by teletype to the Joint Operations Center where fighter and bomber type aircraft are dispatched to the hot targets.

Photo interpretation: This section makes a study of aerial photographs and disseminates military intelligence gleaned from them.

Information of immediate importance is transmitted by telephone or teletype to the Joint Operations Center so that prompt operational action may be taken against targets discovered from the photography.

Photos processed by the P. I. section of this squadron are almost entirely made at night, in many cases targets found on these night photographs are brought under air attack before the night is over or immediately after daylight.

This section distributes sets of the photographs with photo intelligence reports and pilot's traces to three separate headquarters. This material is packaged and delivered early in the morning after the night the pictures are made. The bulk of the work of this section is therefore carried on at night as the flights return from the missions.

The photo intelligence officer briefs the commanding officer and the officers of the squadron each day on the results of the preceding night.

The function of the Armament Section is to inspect and maintain all the equipment in the aircraft pertaining to bombing such as the bombsight, C-I auto pilot, bomb racks and shackles and the electrical system used in synchronizing these units. Also this section procures the necessary number of M-46 photo flash bombs and M-12 photo flash cartridge which is used in the low altitude photographic system. In addition all small arms in the squadron are kept cleaned and maintained.

When combat or training mission is scheduled it is the duty of this section to uncrate, inspect and fuse the necessary number of M-46 flash bombs necessary to accomplish the assigned mission of the aircraft. After this has been done the NCOIC T/Sgt. Gable sees to it that the bombs are loaded in the properly scheduled aircraft. However, before the bombs are loaded the complete bombing system of each aircraft is "run through" to insure the proper operation on the mission. From here on it is in the laps of the combat crews as the Armament Section has completed its job,

Camera Repair section: There are not many of these men and in their case, a little has gone a long way. Somehow, the ten assigned airmen have been spread into a Day Shift, a Night Shift, and a Special Equipment Section.

These men are there, round the clock, to load the film magazines and check them, to install the photo equipment in our RB-26's and then check it, to answer the questions of the flight crews and yes, to check THEM ! When the plane returns, they deservice the magazines and reload them with fresh film. Somehow, in between times, they keep the photo equipment in the best possible shape for combat missions. It is no secret that much of our equipment has been experimental and temperamental; these men have done a splendid job in making that equipment buckle down and do a job.

The communications section consists of one officer and eleven enlisted men and are primarily concerned with maintenance of aircraft communications systems.

Six of the enlisted men are radio specialists and are the ones primarily responsible for this maintenance. They make preflight and daily inspections of aircraft and check flight report forms for write ups or defective equipment. Where defects are listed they make necessary repairs so that the aircraft will be capable of performing its next mission.

The seventh enlisted man is the non-commissioned officer in charge of the section and supervises repair work as well as taking care of the administrative work of drawing maintenance supplies and keeping records of section property and duty schedules.

The communications officer is responsible for the overall operation of the section and in addition maintains a file of communications information available for flight crews and serves as staff officer to advise squadron commander in communications matters.

The electronics section is comprised of one officer and twelve enlisted men, all of whom are specialists in various phases of electronics. They maintain the various types of radar in use in squadron aircraft.

Their work consists of preflight, daily and major inspections of this radar; giving it operational checks, and tuning and aligning the equipment for correct and most efficient operation. When there is equipment failure, they make whatever repairs that are necessary to return this equipment to service. They are supervised by an officer and a non-commissioned officer, both of whom are trained radar technicians.

Trained to maintain aircrew proficiency and participated in numerous tactical exercises worldwide, 1971-1982.

Provided Compass Sight B-57E airborne data link relay, 1971-1976.

Trained USAF, US Marine, and allied RF-4C aircrews, Jul 1982-Dec 1989.

On 26 March 2007, at approximately 1355 local time, an MQ-1B Predator remotely piloted aircraft (RPA), serial number (S/N) 03-3104, crashed during landing at Kandahar Air Base, Afghanistan. The mishap aircraft (MA) was deployed from the 15th Reconnaissance Squadron, 57th Wing, Creech Air Force Base, Nevada, and assigned to the 62nd Expeditionary Reconnaissance Squadron at Kandahar in support of Operation ENDURING FREEDOM (OEF). The mishap aircrew included a United States Air Force pilot and a Royal Air Force sensor operator. The aircraft was severely damaged upon landing with losses valued at \$1,727,425. No one was injured in the accident, and there was no damage to government or private property. Media interest was minimal.

After its OEF mission, the MA was handed over to the launch and recovery element at approximately 1335 local time for landing. Following the approach, the aircraft touched down nose first, porpoised and bounced into the air seven times before skidding to a stop on the right side of the runway. Each bounce increased in magnitude, and the force generated by the fourth bounce was sufficient to cause structural failure to the nose gear. There is clear and convincing evidence the mishap was caused by pilot error. The mishap pilot (MP) misjudged the RPA height above touchdown and confused the initial bounce with a normal aircraft response to his flare inputs. This confusion resulted in the MP setting a neutral pitch input with the erroneous perception that such an input would hold the attitude observed during the bounce. Instead, the neutral pitch input commanded the aircraft to return to its previously trimmed state. As commanded, the aircraft returned to approximately 4-degrees nose low and impacted the runway. Following the subsequent bounce, the MP initiated a go-around; however, he failed to provide the necessary pitch input to establish the go-around attitude. Instead of commanding a nose high pitch attitude, the actual pitch inputs commanded the aircraft nose low on each subsequent bounce. There is clear and convincing evidence that the aircraft hit the runway nose low on the fourth bounce with sufficient velocity to break the gear, and the fifth bounce damaged the multi-spectral targeting system beyond repair. Substantially contributing factors to the mishap are the lack of visual cues and the lack of cues to provide perception of body position

and movement in the ground control station. The unique flight control logic and lack of pilot feedback also substantially contributed to this mishap. The lack of cues is part an inherent design flaw making the system conducive to the types of perceptual errors that occurred during the mishap sequence. These perceptual errors, unique flight control logic, and lack of pilot feedback combined to create a situation in which the aircrew was unable to recognize the proper control inputs necessary to effect recovery.

On 8 May 2009, a multi-role unmanned aerial system (MQ-1B "Predator") tail number (T/N) 05-3140, assigned to the 3rd Special Operations Squadron (3 SOS), Cannon AFB, New Mexico and forward deployed to the 62nd Expeditionary Reconnaissance Squadron (62 ERS), 451st Air Expeditionary Group (451 AEG), Joint Base Kandahar, Afghanistan, in support of OPERATION ENDURING FREEDOM (OEF), crashed into uninhabited terrain in the vicinity of (IVO) Ghazni, Afghanistan, at approximately 1115 Zulu (Z), and was severely damaged beyond economic repair (TAB B-3). There were no military or civilian casualties or fatalities. There was no damage to civilian property. Damage to military property was valued at \$4,588,281.00 (TAB P-3).

The mishap remote piloted aircraft (MRPA) was flying an armed intelligence, surveillance, reconnaissance (ISR) mission in support of OEF. The MRPA taxied and departed at approximately 0900 Z. Approximately two hours into flight the MRPA encountered icing conditions, turbulence, several LL events and a Right Wing Control Module (RWCM) transmitter (TX) failure message. The MRPA entered roll oscillations to the left and right and was unable to return to level flight. Ultimately, the MRPA rolled into a bank angle of approximately 110 degrees (110°) to the left, departed controlled flight and crashed.

At 1107:59Z, a RWCM TX failure message was indicated. A software chip tacked into place using Room Temperature Vulcanizing cement, RTV-162, to facilitate removal for re-programming and calibration updates, without risking damage to the entire circuit board, became partially dislodged due to vibrations and G-loading on the MQ-1B. The ailerons are controlled by the wing control modules.

The AIB president found clear and convincing evidence that the MRPA departed controlled flight after losing control of the right aileron due to the partially dislodged software chip. As the RWCM functionality became increasingly degraded, because of the partially dislodged software chip, the right aileron locked in a neutral position, and a combination of asymmetric loading (due to the munitions stored under the left wing) and turbulence, were significantly contributing factors that caused the MRPA to depart controlled flight resulting in the crash and subsequent severe damage beyond economical repair of the aircraft.

On 12 June 2008, at 0203 local (L) Kandahar time, an MQ-1B aircraft, tail number 06-3169, impacted the ground six miles south of Kandahar Air Base (AB), Afghanistan, while participating in a combat support mission in support of Operation ENDURING FREEDOM. It was forward deployed from the 432d Wing, Creech AFB, Nevada. An aircrew from the 62d Expeditionary Reconnaissance Squadron (ERS), 451st Air Expeditionary Group (AEG), launched the Mishap Remotely Piloted Aircraft (MRPA) from the Launch and Recovery Element at Kandahar. Upon impact the MRPA was damaged beyond economical repair. The estimated cost of aircraft damage is \$3,849,481. There were no injuries and there was no additional damage to government or private property. All maintenance and preflight activities were normal, and the aircraft took off at

0152L. Approximately ten minutes after takeoff, the MRPA experienced uncommanded and erratic flight control movements and the Multi-Spectral Targeting System (MTS) unexpectedly powered down. These malfunctions were accompanied by aural warning tones and the display of at least eight warnings in the warning section of the command screen on the pilot and sensor operator heads down display (HDD). The Mishap Pilot was unable to regain control of the MRPA, and it departed controlled flight and impacted the ground in an unpopulated area six miles south of Kandahar AB. The wreckage was subsequently destroyed by Explosive Ordnance Disposal personnel for security reasons. The Accident Investigation Board President determined, by clear and convincing evidence, the cause of the mishap was a faulty connection between the Primary Control Module (PCM) and W160 cable's P01 connector. The faulty cable connection caused numerous bus node communication failures that resulted in intermittent commanding of flight control surfaces, loss of control of the aircraft, and impact with the ground shortly after takeoff. The PCM and W160 cable's P01 connector were not recovered due to subsequent destruction of the wreckage by Explosive Ordnance Disposal. Therefore, no determination could be made regarding the cause of the faulty connection between the PCM and W160 cable's P01 connector.

On 2 November 2008, at 1427 local (L) Kandahar time, an MQ-1B aircraft, tail number 06-3167, impacted the ground on Kandahar Air Base (AB), Afghanistan, while participating in a combat support mission in support of Operation ENDURING FREEDOM. It was assigned to the 451st Air Expeditionary Group, Kandahar AB. An aircrew from the 62d Expeditionary Reconnaissance Squadron launched the Mishap Remotely Piloted Aircraft (MRPA) from the Launch and Recovery Element at Kandahar. Upon impact the MRPA was damaged beyond economical repair. The estimated cost of aircraft damage is \$4.67 Million. There were no injuries and there was no damage to government or private property.

After normal maintenance and pre-flight checks, the MRPA, loaded with one hellfire missile, taxied and departed at approximately 1422L (local time) into a headwind of approximately 13 to 15 knots sustained, with gusts of 18 to 25 knots. Five minutes into flight, as the MRPA was passing 1,960 feet of altitude, the Mishap Pilot (MP) determined he had overshot his intended course. He initiated a left turn, without rudder, to return to his path. At that time the aircraft rolled completely over due to the aggressive input of 45 degrees left roll, the wind direction, and the weight of the missile on the left wing. The MP made an input of a 56 degrees right roll in an attempt to flip the aircraft back over, however, the MRPA departed controlled flight, began to spin and crashed to the ground. The aircraft was severely damaged by fire and the wreckage shipped to Creech AFB, Nevada.

The Accident Investigation Board President could not determine a cause by clear and convincing evidence. He determined the left turn without rudder, which was too aggressive for the light airframe, combined with the wind and the weight of the missile substantially contributed to the mishap.

On 5 May 2011, at 0916 Zulu time (Z), the mishap remotely piloted aircraft (MRPA), an MQ-1B Predator, tail number 07-3182, crashed approximately 0.5 nautical miles (nm) northeast of Kandahar Air Field (KAF), Afghanistan. The MRPA was an asset of the 3rd Special Operations Squadron, 27th Special Operations Wing, Cannon Air Force Base, New Mexico. At the time of the

mishap, the MRPA was flown by a launch and recovery element (LRE) crew from the 62nd Expeditionary Reconnaissance Squadron, 451st Air Expeditionary Wing, KAF, Afghanistan. The home unit of the mishap pilot (MP) is the 18th Reconnaissance Squadron, 432nd Air Expeditionary Wing, Creech Air Force Base, Nevada. The mishap sensor (MSO) is a member of the Texas Air National Guard whose home unit is the 111th Reconnaissance Squadron, 147th Reconnaissance Wing, Ellington Field, Texas. There were no injuries, deaths, or reported non-governmental property damage as a result of the crash. The \$4.2 million MRPA was destroyed and the airfield perimeter fence was slightly damaged. After normal pre-flight checks and taxi, the MRPA departed KAF in support of Operation ENDURING FREEDOM. Four hours and 48 minutes after takeoff, the mission crew observed high turbocharger oil temperature and conducted the engine overheat checklist, however the temperature did not return to normal. The crew initiated a return to KAF and approximately 15 minutes later after observing additional anomalous engine indications, declared an emergency. The MRPA was handed off to the MP and MSO at 15,200 ft above field elevation (AFE) approximately 10 miles from KAF. The MP descended the MRPA over the runway while conducting normal and emergency checklists. At approximately 7,600 ft AFE and 8 minutes prior to the crash, the engine failed. The crew did not recognize the engine failure at this time. The MP began the final orbit 2,100 ft above the flight manual recommended altitude for an engine-out recovery. The MP flew an extended pattern while maintaining a higher than recommended airspeed. On final approach, 0.8 miles from the runway, the crew recognized the MRPA was too low on the approach and the MP moved the throttle to full power with no response from the engine. The MRPA impacted the top of the perimeter fence and crashed inside the base perimeter. The Accident Investigation Board (AIB) President determined by clear and convincing evidence that there were two causes of the mishap. First, failure of the engine cooling system resulted in engine failure. Second, the MP failed to properly execute a successful engine-out recovery, causing the aircraft to crash prior to the runway. In addition, the AIB President determined by the preponderance of the evidence that a leak at the coolant feed elbow on the number one engine cylinder was a substantially contributing factor to the mishap.

KANDAHAR AIRFIELD, Afghanistan (AFNS) -- An MQ-1 Predator assigned here recently became the first Predator to pass 20,000 flying hours over Afghanistan, a feat equivalent to flying 15 hours every other day, for 2,667 days. While the Predator remotely piloted aircraft program surpassed one million hours of total development, test, training and combat in August 2011, this is the first airframe to accumulate 20,000 flying hours individually. "Reaching this milestone is significant, but what's more special are the missions we enable every day," said Lt. Col. Russ Garner, 62nd Expeditionary Reconnaissance Squadron commander. "Maintainers are the key to enabling a single airframe to reach so many hours, Garner said. Maintenance keeps the aircraft flying, especially through the extreme weather in Afghanistan, he added. "Without maintainers we couldn't reach this milestone, let alone get in the air," the squadron commander said. "This achievement is really a tribute to our maintainers." A team of military and civilian personnel maintain and repair the aircraft. The mission of the 62nd ERS is to provide launch and recovery for RPA assigned to the 451st Air Expeditionary Wing here. "With only two percent of the RPA aircrew [in the career field deployed here], we're enabling 98 percent of the mission," Garner said. "During their deployment there are no days off for the crew, while they set an unbelievable

operations tempo." The MQ-1 and MQ-9 Reaper are assigned to the squadron and conduct intelligence, surveillance, and reconnaissance, and close-air support missions in support of Operation Enduring Freedom. The aircraft are operated by Airmen with the 62nd ERS, U.S. crews located stateside and Royal Air Force crews in the United Kingdom 2013

The MQ-9 extended-range Reaper debuted in combat over Afghanistan, launching from Kandahar Airfield earlier this month, officials announced. Maintainers and General Atomics contractors retrofit roughly half of the 62nd Expeditionary Reconnaissance Squadron's MQ-9s at Kandahar a month after receiving the kits. "One of the things that at our level we are really proud of here is that we did it on top of completing our regular flying schedule," the 62nd ERS maintenance operations officer said in a release. The Reaper-ER upgrade package includes an additional 1,350 pounds of fuel in two external tanks, a new four-bladed propeller, heavyweight undercarriage, and performance upgrades, according to the release. Depending on the configuration, upgraded aircraft can stay aloft up to 40 percent longer than the standard MQ-9. The Air Force ordered an initial 38 of the ER-variants under a quick-reaction requirement last year, and declared the RPA initially operational in September. The 62nd ERS flew the first Reaper-ER combat sortie on Dec. 1. 2015

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Air Force Order of Battle  
Created: 7 Mar 2012  
Updated: 6 Mar 2019

Sources

Air Force Historical Research Agency. U.S. Air Force. Maxwell AFB, AL.