



THE AIR FORCE ASSOCIATION

THE AIR FORCE IN THE VIETNAM WAR



THE SAIGON POST

Tuesday, March 24,

Phnom Penh Talks
Postponed Again

VN DELEGATION
RETURNS HOME

Viet Cong Kill 22
Civilians Aboard Bus

The preliminary talks between Viet Nam and Cambodia to settle border problems have been temporarily interrupted by common accord, and the Vietnamese delegation returned to Saigon yesterday evening.



The Air Force Association

The Air Force Association (AFA) is an independent, nonprofit civilian organization promoting public understanding of aerospace power and the pivotal role it plays in the security of the nation. AFA publishes *Air Force Magazine*, sponsors national symposia, and disseminates information through outreach programs of its affiliate, the Aerospace Education Foundation. Learn more about AFA by visiting us on the Web at www.afa.org.



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THE AIR FORCE IN THE VIETNAM WAR

By John T. Correll

December 2004

T

hose who fought there, it seems like yesterday, but it was 40 years ago that the US Air Force deployed in fighting strength to Southeast Asia. The Air Force and the Navy flew their initial combat missions in late 1964 and early 1965.

The Vietnam War began in earnest in March 1965 with Operation Rolling Thunder, which sent US aircraft on strikes against targets in North Vietnam. Soon, our ground forces were engaged as well. Eight years would pass before US forces withdrew from the war, which had by then claimed 47,378 American lives.

It was a war we didn't win but one in which the US armed forces performed with honor, courage, dedication, and capability. On the 40th anniversary of its beginning, this almanac collects the numbers, the dates, and the key facts of the US Air Force experience in that war.

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A B-52 drops bombs over North Vietnam.



F-4C pilot Capt. Max Cameron (r) and 1st Lt. Robert Evans, his rear seat pilot, shot down a MiG-17 with a Sidewinder.

Casualties and Losses

US Casualties in the Vietnam War	25
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Photo via Martin Winter

Lines of Air Force F-4s sit in their hardened revetments and hangars at a Southeast Asian base.

Southeast Asia



PEOPLE

US Military Personnel in Southeast Asia

	South Vietnam		Thailand	
	Air Force	All Services	Air Force	All Services
1960	68	875	44	319
1961	1,006	3,164	57	542
1962	2,429	11,326	1,212	4,353
1963	4,630	16,263	1,086	4,126
1964	6,604	23,310	2,943	6,505
1965	20,620	184,314	9,117	14,107
1966	52,913	385,278	26,113	34,489
1967	55,908	485,587	33,395	44,517
1968	58,434	536,134	35,791	47,631
1969	58,422	475,219	32,901	44,470
1970	43,053	334,591	27,858	36,110
1971	28,791	156,776	26,851	31,916
1972	7,608	24,172	35,856	43,168
June 1973	14	49	35,135	42,469

The American military presence in Southeast Asia peaked in 1968. “Vietnamization” of the war began the next year, with the first US troop withdrawals in July 1969. All told, some 3.4 million troops from all branches of the armed services spent time on duty in Southeast Asia. Except for 1973, the figures on this chart are as of Dec. 31 each year. The “All Services” totals include Air Force, Army, Navy, Marine Corps, and Coast Guard.

Sources: MACV, MACTHAI, Department of Defense.



Forward air controllers directed air attacks in Vietnam.



Pilots and crew chiefs worked together closely, preparing for air operations over Southeast Asia.



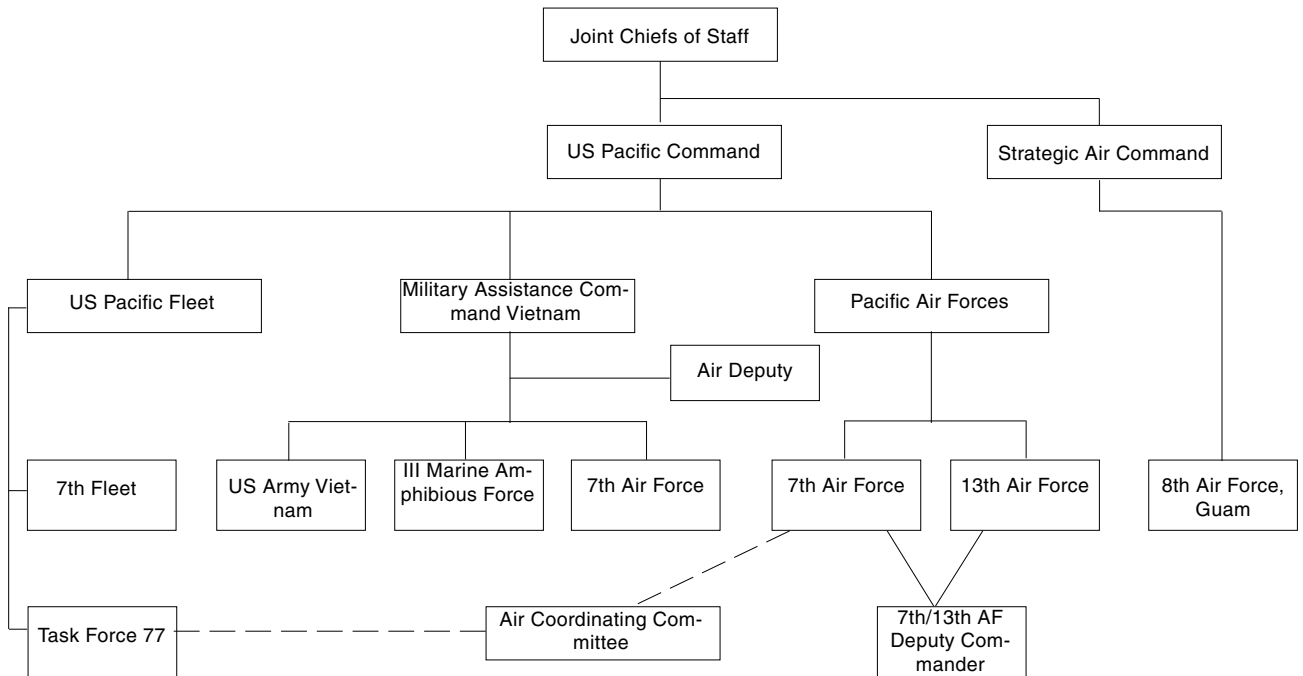
Security forces maintained a constant vigil against insurgent attacks on USAF bases.



A1C Gale Mobley from the Medical Civic Action Program innoculates a Vietnamese child.

ORGANIZATION

Lines of Command 1966-72



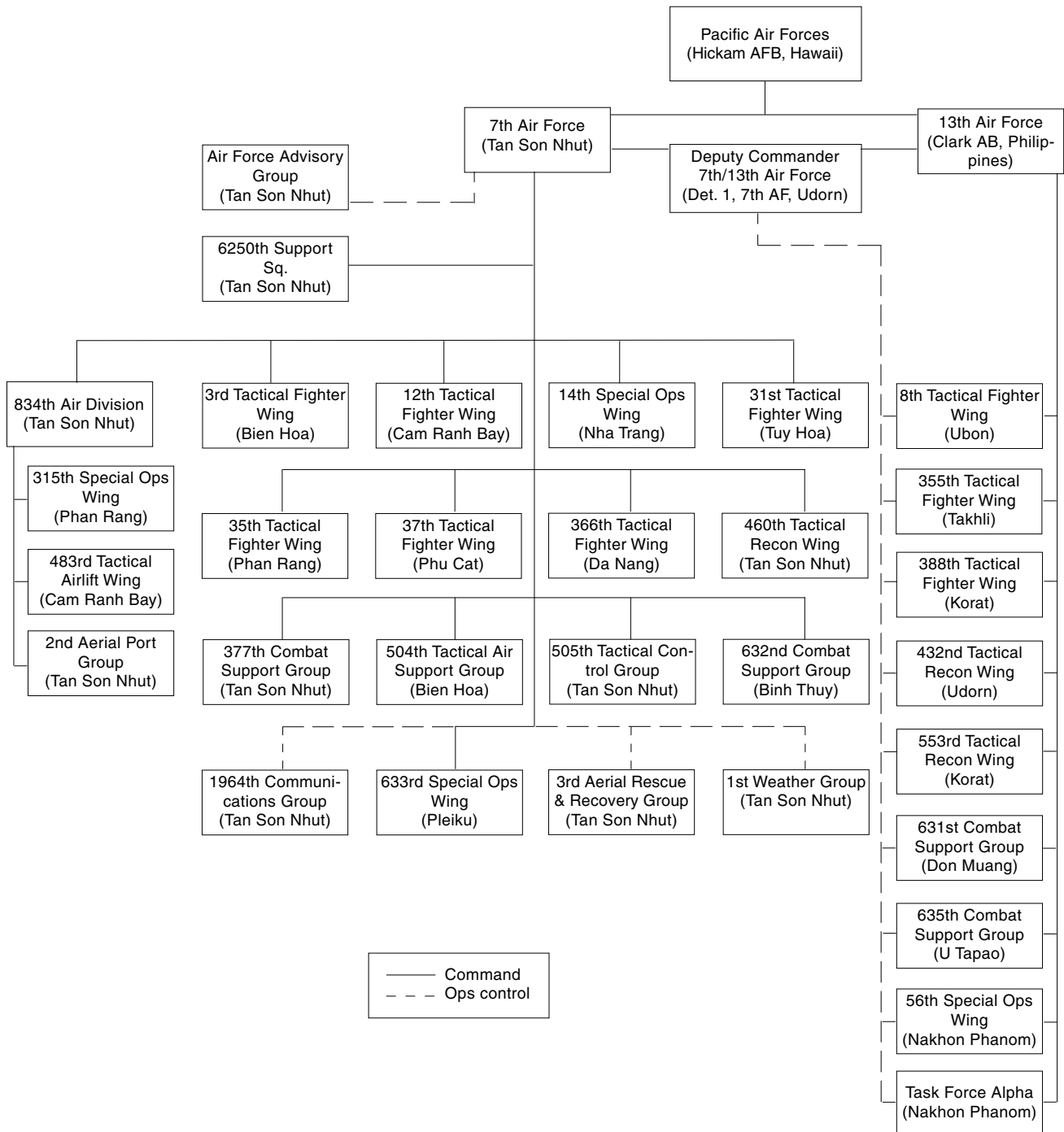
Source: Gen. William W. Momyer, USAF (Ret.), *Air Power in Three Wars*.

Military Assistance Command Vietnam was a subunified command of US Pacific Command, with Army, Marine Corps, and Air Force elements. MACV controlled the war in South Vietnam, but Pacific Command in Hawaii retained control of the war in North Vietnam, via Pacific Air Forces and Pacific Fleet. The commander of 7th Air Force was chairman of a coordinating committee for key operations in North Vietnam.

Seventh Air Force in Saigon was under operational control of MACV for operations in South Vietnam and Route Pack 1 (the southern part of North Vietnam), but 7th Air Force was controlled by PACAF for operations in North Vietnam (Route Packs 5 and 6A). Air Force wings in Thailand were part of 13th Air Force in the Philippines, but were under the operational control of 7th Air Force in Saigon. At Udorn AB, Thailand, 7th/13th Air Force was headed by a general officer who was deputy commander of both 7th and 13th Air Forces. Aircraft based in South Vietnam were used primarily in South Vietnam. Aircraft in Thailand were used in North Vietnam and Laos. Strategic Air Command retained control of B-52 bombers, tankers, and strategic reconnaissance aircraft.

7th Air Force and 7th/13th Air Force

July 15, 1969



Source: Carl Berger, *The United States Air Force in Southeast Asia, 1961-1973* (USAF).

The Commanders

US Pacific Command, Honolulu

Adm. Harry D. Felt	July 31, 1958	June 30, 1964
Adm. U.S. Grant Sharp	June 30, 1964	July 31, 1968
Adm. John S. McCain Jr.	July 31, 1968	Sept. 1, 1972
Adm. Noel A.M. Gayler	Sept. 1, 1972	Aug. 31, 1976

Pacific Air Forces, Honolulu

Gen Hunter Harris Jr.	Aug. 1, 1964	Jan. 31, 1967
Gen. John D. Ryan	Feb. 1, 1967	July 31, 1968
Gen. Joseph J. Nazzaro	Aug. 1, 1968	July 31, 1971
Gen. Lucius D. Clay	Aug. 1, 1971	Sept. 30, 1973
Gen. John W. Vogt Jr.	Oct. 1, 1973	June 30, 1974

Military Assistance Command Vietnam, Saigon

Gen. Paul D. Harkins	Feb. 6, 1962	June 20, 1964
Gen. William C. Westmoreland	June 20, 1964	July 1, 1968
Gen. Creighton W. Abrams	July 1, 1968	June 29, 1970
Gen. Frederick C. Weyland	June 29, 1970	March 29, 1973

7th Air Force, Tan Son Nhut AB, Vietnam

Organized April 1, 1966, replacing 2nd Air Division

Lt. Gen. Joseph H. Moore*	April 1, 1966	June 30, 1966
Gen. William W. Momyer	July 1, 1966	July 31, 1968
Gen. George S. Brown	Aug. 1, 1968	Aug. 31, 1970
Gen. Lucius D. Clay Jr.	Sept. 1, 1970	July 31, 1971
Gen. John D. Lavelle	Aug. 1, 1971	April 6, 1972
Gen. John W. Vogt Jr.	April 7, 1972	Sept. 30, 1973

*Moore was commander of 2nd Air Division from Jan. 21, 1963, to March 31, 1966. Seventh Air Force left Vietnam and moved its headquarters to Nakhon Phanom AB, Thailand, in March 1973.

7th/13th Air Force, Udorn AB, Thailand

Maj. Gen. Charles R. Bond Jr.	Jan. 6, 1966	March 31, 1967
Maj. Gen. William C. Lindley Jr.	June 1, 1967	May 31, 1968
Maj. Gen. Louis T. Seith	June 1, 1968	May 31, 1969
Maj. Gen. Robert L. Petit	June 1, 1969	March 5, 1970
Maj. Gen. James F. Kirkendall	April 15, 1970	Oct. 11, 1970
Maj. Gen. Andrew J. Evans Jr.	Oct. 12, 1970	June 30, 1971
Maj. Gen. DeWitt R. Searles	July 1, 1971	Sept. 8, 1972
Maj. Gen. James D. Hughes	Sept. 9, 1972	April 19, 1973

The commander was a deputy commander of both 7th Air Force and 13th Air Force. In March 1973, 7th/13th Air Force reverted to Det. 7 of 13th Air Force.



PACAF Commander Gen. John Ryan (l) meets with 7th Air Force chief Lt. Gen. William Momyer.



Army Gen. William Westmoreland (l) and Army Gen. Creighton Abrams (r) pin a fourth star on USAF Gen. William Momyer.



Gen. Lucius Clay Jr. (l) transfers command of 7th Air Force to Gen. John Lavelle in 1971.

USAF ORDER OF BATTLE

USAF Aircraft in Thailand and South Vietnam

	All Aircraft	F-105	F-4	B-52
1965	460	79	18	—
1966	889	126	188	—
1967	1,429	129	182	10
1968	1,768	108	218	28
1969	1,840	70	288	39
1970	1,602	65	212	44
1971	1,132	12	216	44
1972	989	30	355	54
1973	675	24	218	53

Figures are as of June 30 each year. Additional B-52s were based on Guam, the number varying from about 30 in 1965 to about 150 in 1972. In Thailand, the attack force included 65 A-7s and 45 F-111s by late 1972.

Source: Wayne Thompson, *To Hanoi and Back* (Smithsonian/USAF).



SAC B-52 bombers were the workhorses of the Vietnam War.



The F-105 Thunderchief was a key factor early in the war.

USAF Squadrons in Southeast Asia

	In 1968		In 1972	
	Squadrons	Aircraft	Squadrons	Aircraft
Vietnam				
Tactical Fighter/Bomber/Attack	23	408	—	14
Special Operations	11	204	1	24
Tactical Airlift	7	167	1	56
Tactical Air Control	6	280	2	125
Recon/EW	6	101	2	37
Rescue	3	40	2	18
Total Vietnam	56	1,200	8	274
Thailand				
Strategic Bombers, Tankers	2	66	—	142
Tactical Fighter/Bomber	13	239	11	371
Special Operations	5	85	4	45
Tactical Airlift	—	12	—	8
Tactical Air Control	2	41	3	58
Recon/EW/Drone Support	6	104	2	61
Rescue	1	21	1	30
Total Thailand	29	568	21	715
Total Southeast Asia	85	1,768	29	989

Figures are as of the end of FY68 and FY72.

Source: USAF Management Summary Southeast Asia, September 1973.

USAF Attack Aircraft

July 1968-December 1972

Bases in South Vietnam		1968		1969		1970		1971		1972	
		July 31	Dec. 31	June 30	Dec. 31	June 30	Dec. 31	June 30	Dec. 31	June 30	Dec. 31
Bien Hoa	A-1	3				2	2				
	AC-47	5	5	5							
	AC-119									4	5
	F-100	47	55	50	22	19					
Binh Thuy	AC-47	4	3								
Cam Ranh Bay	F-4	54	49	47	42						
Da Nang	A-1		2	3	11	9	2	2	2	2	
	AC-47	4	4	5							
	AC-119				6	9	8	4	5	3	15
	F-4	55	53	57	47	48	48	55	55		
Nha Trang	AC-47	7	9	13							
	AC-119			7							
Phan Rang	AC-47	3	3								
	AC-119			6	11	9	9	13			
	B-57	23	15	9							
	F-100	68	66	67	77	65	75	59			
Phu Cat	AC-47	4	3	3							
	AC-119				3	6	1				
	F-4			34	34	30	32	36			
	F-100	69	65								
Pleiku	A-1	18	18	17							
	AC-47	3	4	3							
Tan Son Nhut	AC-119			5	5	5	9	10			
Tuy Hoa	AC-119				4						
	F-100	88	74	86	88	86					
Total South Vietnam		455	428	417	350	288	186	179	62	9	20

Bases in Thailand

Korat	A-7										67
	F-4		20	40	34	32	27	32	38	53	31
	F-105	55	34	18			11	12	14	30	24
Nakhon Phanom	A-1	33	39	54	70	47	25	25	19	16	
	A-26	12	17	16							
	F-105						5	7	11	8	
Takhli	F-4									96	
	F-105	55	55	54	74	65	55				
	F-111										47
Ubon	A-1					2	1				
	AC-130	1	4	4	7	3	10	8	18	12	13
	B-57						9	10	10		
	F-4	74	72	73	67	67	73	56	73	100	106
Udorn	AC-47			2	3						
	AC-119					3					
	F-4	39	40	35	35	34	27	37	42	104	121
Total Thailand		269	281	296	290	253	243	187	225	419	409
Grand Total		724	709	713	640	541	429	366	287	428	429

Source: Col. Perry L. Lamy, Air War College, 1995.

Principal USAF Aircraft of the Vietnam War

Fighter and Attack Aircraft

A-1 Skyraider. Propeller-driven Navy attack bomber, adapted for use by Air Force. Air Commandos flew the A-1E "Spad" two-seat version. The single-seat A-1H "Sandy" flew escort for rescue operations.

A-7D Corsair II. Began service with Navy, deployed in Southeast Asia by the Air Force in the late summer of 1972, and used in the closing months of the war for tactical bombing and as an escort on gunship missions.

A-37 Dragonfly. Armed variant of the T-37 jet trainer, it was flown by USAF and the South Vietnamese Air Force. It was an effective performer, both in the attack role and as a forward air control aircraft.

F-4 Phantom. Best fighter of the Vietnam War and most versatile. Used for air superiority, dropping bombs, reconnaissance, and forward air control. Originally developed by the Navy, adopted by the Air Force and deployed to Southeast Asia in 1965. Early versions relied on missiles in combat, having no guns. The F-4E had a 20 mm cannon. F-4s accounted for 107 of the 137 MiGs shot down by the Air Force.

F-100 Super Sabre. USAF's first supersonic fighter. Used extensively on missions over North Vietnam in the early part of the war. F-100F had two cockpits, was flown by the "Misty" forward air controllers.

F-105 Thunderchief. The Lead Sled, The Thud. Signature airplane of the Rolling Thunder campaign from 1965 to 1968. Thuds flew 75 percent of the strikes and took more of the losses over North Vietnam than any other type of airplane. F-105Fs flew as Wild Weasel aircraft, finding and destroying surface-to-air missile (SAM) sites.



A-1H Skyraider



C-5A Galaxy

Photo by Ed Skowron via Warren Thompson



A-7D Corsair II



F-100 Super Sabre

Airlifters and Tankers

C-5A Galaxy. Huge, with more capacity than other airlifters but did not make its appearance in Vietnam until August 1971 in the later phase of the war.

C-7 Caribou. Light airlifters, taken over by the Air Force from the Army in 1966. Worked smaller and more remote locations.

C-123 Provider. Previously declared obsolete and scheduled for retirement. Supported South Vietnamese ground forces in early 1960s, later served as light airlifter for US forces as well. Performed with distinction at Khe Sanh, landing with supplies that could not be airdropped and evacuating casualties.

C-124 Globemaster. Aging, propeller-driven aircraft known as "Old Shaky." It was the Air Force's long-range airlifter until the C-141 was fielded. Clamshell doors opened in the nose so vehicles could be driven on and off.

C-130 Hercules. Four-engine turboprop. USAF's main tactical airlifter in Southeast Asia. Also used as gunship, airborne command post, and for other missions. Still in service 40 years later and going strong.

Bombers

B-52 Stratofortress. The Buff. In action from 1965 on, flying Arc Light missions, but political constraints kept it from being used with full effect against targets in North Vietnam until Operation Linebacker II in December 1972.

B-57 Canberra. First American jet aircraft deployed to Vietnam. Used in North Vietnam in early part of the war, later employed for night interdiction in Laos and in other roles. Variant of a British design.



B-52D Stratofortress



B-57 Canberra

C-141 Starlifter. Main strategic airlifter in the war. First deployed in 1965. Twice as fast as C-124 and twice the load capability. Made daily shuttle flights between US and Southeast Asia, taking cargo in and bringing people and casualties out.

KC-135 tankers. On their way into combat, strike flights met the KC-135s to top off their fuel tanks, then met them again on the way out for fuel to get home. The tankers were notorious for violating the rules and crossing “the fence” into North Vietnam to gas up fighters running on fumes.

Forward Air Controllers

O-1 Bird Dog. Forward air control aircraft, found and marked targets for strike flights. Low and slow, with a top speed of 115 mph. Carried smoke rockets but no armament.

O-2 Skymaster. A little bigger and a little faster than the O-1. It had two engines to the Bird Dog’s one, making it more likely to survive a hit from ground fire. It could be fitted with a pod for a 7.62 mm minigun.

OV-10 Bronco. Twin turboprop, introduced in 1968, considerably sturdier than O-1 and O-2. Four 7.62 mm machine guns. Max speed of 281 mph.

Gunships

AC-47 Spooky. The first gunship. Made its debut with the Air Commandos in December 1964, breaking up a Viet Cong attack on an outpost. It had three 7.62 mm miniguns that could pump out 6,000 rounds a minute.

AC-119G Shadow and AC-119K Stinger. Shadow had four miniguns instead of three. Stinger added two 20 mm cannon. Shadow flew close air support and air base defense missions. Stinger concentrated on trucks on the Ho Chi Minh Trail.

AC-130 Spectre. The ultimate gunship. In addition to miniguns, two 20 mm cannons and two 40 mm Bofors guns. It worked at night, enabled by infrared sensors, a low-level TV sensor, and a “Black Crow” sensor that detected electronic emissions.



C-141 Starlifter



O-2 Skymaster



AC-130A Spectre



EC-121D Super Constellation



HH-3E Jolly Green Giant

Rescue Helicopters

HH-3E Jolly Green Giant. Most famous of the rescue and recovery helicopters, built for missions deep in North Vietnam. It could be refueled in flight and had a range of 736 miles. It entered service in Southeast Asia in 1967.

HH-43F Huskie. “Pedro.” Utility helicopter designed for base fire and crash work, pressed into service for rescue missions early in the war. It was slow and had a short operating range, but it accounted for more lives saved than any other rescue helicopter in the war.

HH-53C Super Jolly. Largest, fastest, and most powerful of the rescue helicopters. It had a top speed of 195 mph and could carry up to 24 litter patients. In addition to its other capabilities, it mounted three 7.62 miniguns for defense.

Reconnaissance and Control

RF-4C. Took over most of the tactical reconnaissance job from 1967 on. Typically flew missions over North Vietnam without escort. Continued to set the standard for aerial photo reconnaissance through Gulf War I in 1991.

RF-101. USAF’s primary photo reconnaissance aircraft over North Vietnam in the early years of the war. RF-4C, which had more sophisticated cameras and sensors and which could better cope with the MiG-21, took over in the north, but the RF-101 flew missions in Laos and South Vietnam until 1970.

EC-121 Super Constellation. Two variants saw service in Southeast Asia. “College Eye” EC-121Ds—the ones with radomes above and below the fuselage—flew radar and airborne early warning missions. “Bat Cat” EC-121Rs, with camouflage but no radomes, flew long missions to monitor “Igloo White” intelligence sensors seeded along the Ho Chi Minh Trail.

Principal US Navy and Marine Corps Aircraft

A-4 Skyhawk. The single-engine A-4 light attack bomber was the Navy's primary light attack aircraft at the beginning of the war. It had been designed in the 1950s to be light and agile. Unlike most carrier aircraft, it did not have folding wings because of its short (27 feet, 6 inches) wingspan. It was also used by the Marine Corps from land bases. The "Scooter" flew more bombing missions in Vietnam than any other Navy aircraft. In 1974, a variant of the A-4 replaced the F-4 for the Navy's Blue Angels aerial demonstration team.



A-4 Skyhawk

A-6 Intruder. The twin-engine A-6 was an excellent all-weather bomber. It could carry more than 15,000 pounds of ordnance. It has been operational since 1963. It was subsonic but had good range and accuracy not available from other aircraft in the theater. The A-6 was instantly recognizable by the refueling probe, which rose like a crank handle in front of the cockpit. It was crewed by a pilot and a navigator, seated side by side. It was still in service for Gulf War I in 1991.



A-6A Intruder

A-7 Corsair. The A-7 deployed to Vietnam in 1967, supposedly to replace the A-4 in the light attack role. Instead, both of the aircraft continued in service for the rest of the war. The A-7 was modeled on the F-8 Crusader (both were Vought aircraft) but was shorter and had less sweep to the wings. The A-7 was also flown by the Air Force late in the war and stayed in service with the Navy until replaced years later by the F/A-18.

F-4 Phantom. The F-4 entered service first with the Navy, then with the Air Force. It was the best fighter of the Vietnam War. All of the Navy and Air Force aces were F-4 pilots. The F-4 was also used for interdiction, reconnaissance, close air support, and forward air control missions. It remained in production until 1979 and flew with the air arms of numerous nations.

F-8 Crusader. The F-8 was the principal fighter for the Navy and Marine Corps in the early part of the war. It carried Sidewinder missiles but relied mainly on its 20 mm cannon, being the last US fighter designed with guns as the primary weapon. It accounted for 18 MiGs shot down in combat and also operated in other roles, including photo reconnaissance.

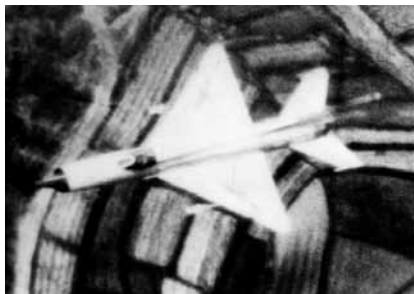


F-8 Crusader

The MiGs

MiG-15. An updated model of the Soviet jet fighter that confronted—and was bested by—the American F-86 Sabre in the Korean War. The MiG-15 was obsolete and of limited combat value, but the North Vietnamese continued to field it in considerable numbers. It was used mostly for training.

MiG-17. Advanced, faster, and more stable version of the MiG-15. Three of North Vietnam's 16 fighter aces flew MiG-17s. Especially effective at lower altitudes, where its 23 mm and 37 mm cannons could be used to advantage in a turning fight. The MiG-17 defended North Vietnam's airfields and patrolled the approach and departure routes used by US aircraft.



MiG-21

MiG-19. Chinese variant of the supersonic Soviet fighter of the late 1950s. It did not appear in Vietnam until after the 1968 bombing halt. It carried two heat-seeking Atoll missiles (similar to the US AIM-9 Sidewinder) but depended mostly on its three 30 mm guns.

MiG-21. North Vietnam's best fighter and a close match in capability with the American F-4. The F-4 was slightly faster, but the MiG-21 had better acceleration. The MiG-21 was especially effective at higher altitudes. It had a 23 mm cannon but relied mainly on its four Atoll missiles. Thirteen of North Vietnam's 16 fighter aces flew MiG-21s.

OPERATIONS

Notable Air Operations

Operation	Dates	Description
Farm Gate	Oct. 1, 1961-July 28, 1963	Training and support for South Vietnamese Air Force.
Ranch Hand	Jan. 7, 1962-Jan. 7, 1971	Defoliation of jungle to expose Viet Cong sanctuaries, movements, and ambushes.
Barrel Roll	Dec. 14-April 17, 1964	Support of ground forces in northern Laos.
Flaming Dart	Feb. 7-11, 1965	Precursor to Rolling Thunder. Air strikes against North Vietnam in reprisal for Viet Cong attacks on US bases.
Rolling Thunder	March 2, 1965-Oct. 31, 1968	Sustained air campaign over North Vietnam.
Steel Tiger	April 3, 1965-Feb. 21, 1973	Interdiction of Ho Chi Minh Trail.
Arc Light	June 18, 1965-Aug. 15, 1973	Strategic Air Command B-52 strikes in Southeast Asia.
Bolo	Jan. 2, 1967	"MiG Sweep" in which seven North Vietnamese aircraft are shot down in 12 minutes.
Eagle Thrust	Nov. 17-Dec. 29, 1967	Huge airlift of troops and cargo from Ft. Campbell, Ky., to Bien Hoa.
Commando Hunt	Nov. 1, 1968-March 30, 1972	Intensified air strikes in southern Laos.
The "Menus"	March 18, 1969-May 1970	Covert bombing of Cambodia; series of missions named Breakfast, Lunch, Dinner, Snack, Supper, and Dessert.
Linebacker I	May 10-Oct. 23, 1972	Resumed bombing of North Vietnam, almost four years after end of Rolling Thunder.
Linebacker II	Dec. 18-29, 1972	Massive air strikes on Hanoi and Haiphong.

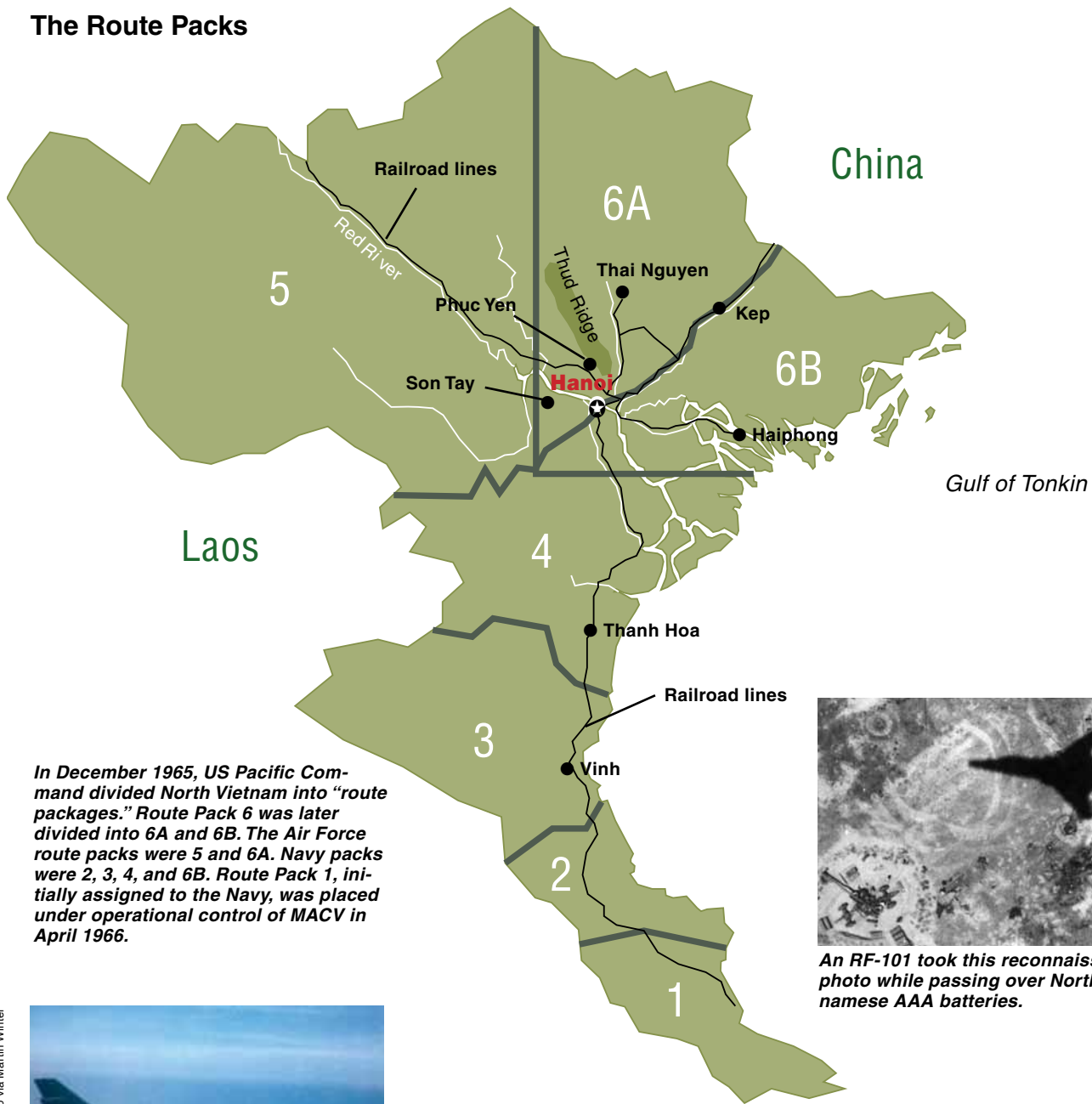
Attack Sorties in Southeast Asia

By US Air Force, Navy, Marine Corps, and South Vietnamese Air Force

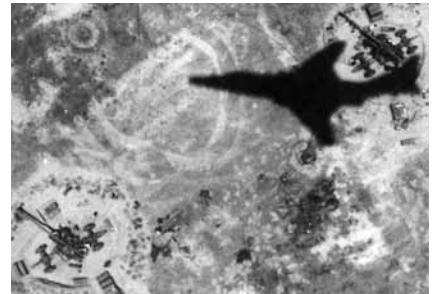
	1966	1967	1968	1969	1970	1971	1972	January 1973
In North Vietnam								
USAF	44,482	54,316	41,057	213	699	1,195	16,785	729
USN	32,954	42,587	40,848	72	404	510	26,754	787
USMC	3,695	8,672	10,326	—	10	—	459	44
VNAF	814	127	—	—	—	—	—	—
In South Vietnam								
USAF	70,646	116,560	134,890	96,524	48,064	11,842	40,322	1,303
USN	21,610	443	5,427	5,744	3,895	2,124	23,505	4,149
USMC	32,430	52,825	64,933	49,823	24,146	2,250	13,833	1,160
VNAF	31,632	29,687	22,817	36,217	28,249	30,693	48,569	4,429
Other SEA								
Laos, Cambodia	48,469	44,450	75,274	144,343	125,120	116,790	45,608	5,751
B-52	5,235	9,686	20,568	19,498	15,103	12,554	28,380	2,769
Total	291,967	359,353	416,140	352,434	245,690	177,958	244,215	21,121

Source: Department of Defense report, November 1973.

The Route Packs



In December 1965, US Pacific Command divided North Vietnam into "route packages." Route Pack 6 was later divided into 6A and 6B. The Air Force route packs were 5 and 6A. Navy packs were 2, 3, 4, and 6B. Route Pack 1, initially assigned to the Navy, was placed under operational control of MACV in April 1966.



An RF-101 took this reconnaissance photo while passing over North Vietnamese AAA batteries.



The F-100 Super Sabre performed close air support.



An F-4 was armed with a new weapon that would change warfare—the laser guided bomb.

USAF Sorties in North Vietnam

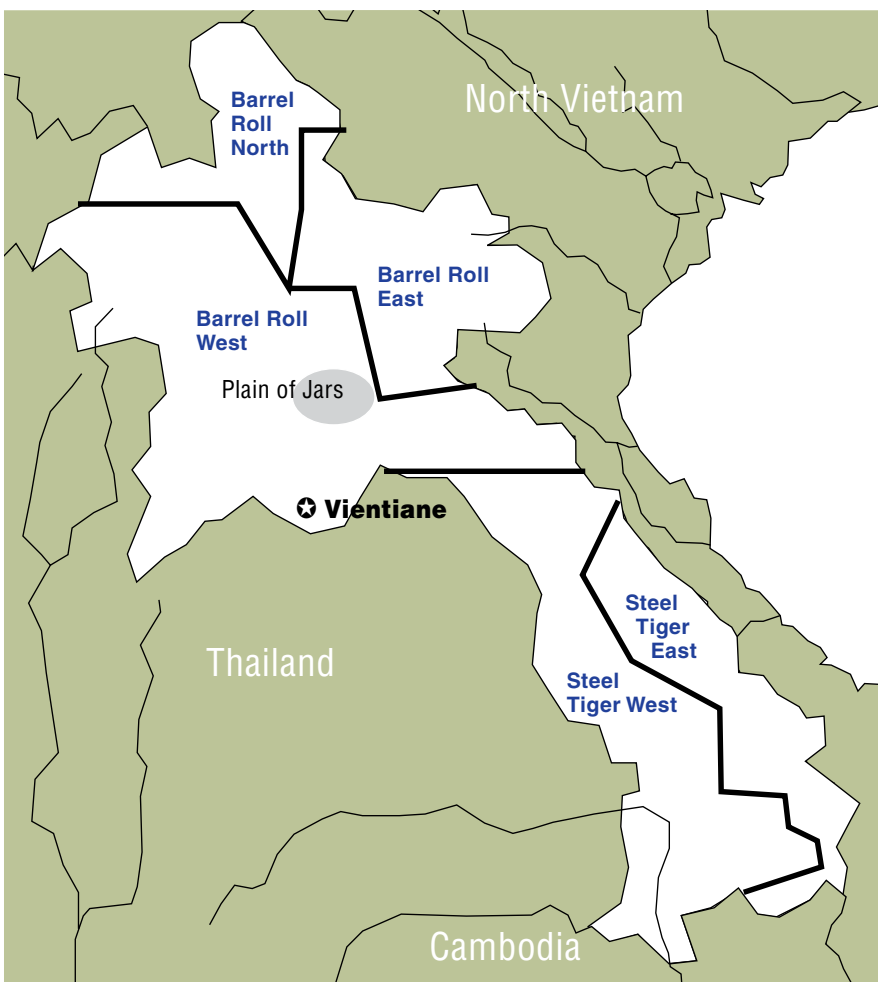
	Attack		CAP/ Escort	Recce	Combat Support	Total
	Fighters	B-52s				
1965	11,599	—	5,675	3,294	5,554	26,122
1966	44,482	280	9,041	7,910	16,924	78,637
1967	54,312	1,364	5,617	11,714	28,078	101,089
1968	41,057	686	3,015	7,896	24,027	76,681
1969	213	—	939	2,905	3,965	8,022
1970	699	—	2,806	3,320	4,849	11,674
1971	1,195	—	3,419	2,044	2,924	9,582
1972	17,096	4,440	9,658	1,965	4,655	37,815
1973	755	533	526	132	381	2,327
Total	171,408	7,303	40,696	41,180	91,357	351,949

Five gunship sorties (four in 1967, one in 1972) have been added to the "Total" column.
Source: Wayne Thompson, *To Hanoi and Back* (Smithsonian/USAF).

Air Operations in Laos

"Barrel Roll" in northern Laos and "Steel Tiger" in the south referred both to operations and to geographic designations. Steel Tiger East—also called "Tiger Hound"—was considered an extension of the fight in South Vietnam and was under the operational control of MACV. Pacific Command retained control in the rest of the country. The US ambassador to Laos exerted strong influence and constraints on all operations in Laos. Air operations, both south and north, were conducted by 7th Air Force, employing aircraft based in Thailand and South Vietnam. SAC B-52s also operated extensively in Laos.

Sources: Col. Perry L. Lamy, Air War College, 1995;
Gen. William W. Momyer, USAF (Ret.), *Air Power in Three Wars* (USAF).



USAF MiG Victories

by Aircraft and Weapon

Aircraft	Weapons/Tactics	MiG-17	MiG-19	MiG-21	Total
F-4C	AIM-7 Sparrow	4	0	10	14
	AIM-9 Sidewinder	12	0	10	22
	20 mm gun	3	0	1	4
	Maneuvering tactics	2	0	0	2
F-4D	AIM-4 Falcon	4	0	1	5
	AIM-7 Sparrow	4	2	20	26
	AIM-9 Sidewinder	0	2	3	5
	20 mm gun	4	0	2	6
	Maneuvering tactics	0	0	2	2
F-4E	AIM-7 Sparrow	0	2	8	10
	AIM-9 Sidewinder	0	0	4	4
	AIM-9/20 mm gun (combined)	0	0	1	1
	20 mm gun	0	1	4	5
	Maneuvering tactics	0	1	0	1
F-4D/F-105F	20 mm gun	1	0	0	1
F-105D	20 mm gun	22	0	0	22
	AIM-9 Sidewinder	2	0	0	2
	AIM-9/20 mm gun (combined)	1	0	0	1
F-105F	20 mm gun	2	0	0	2
B-52D	.50 cal. gun	0	0	2	2
Totals		61	8	68	137



Photos via Martin Winter

Maj. Ralph Kuster shot down this MiG-17 with his F-105's 20 mm guns.

The Air Force fighter most successful against the MiGs in aerial combat was the F-4. The radar-guided AIM-7 Sparrow accounted for more of the victories than any other weapon.

Source: Carl Berger, *Aces & Aerial Victories* (USAF).

Bombing Halts and Pauses in Air Operations Over North Vietnam

May 12-May 18, 1965.

Purpose was to test Hanoi's response and willingness to negotiate.

Dec. 24, 1965-Jan. 31, 1966.

Christmas cease-fire, extended by Lyndon B. Johnson's "peace initiative." Hanoi failed to respond.

Feb. 8-13, 1967.

Cease-fire for Tet religious holiday. Perception was that Hanoi might be willing to negotiate. Instead, North Vietnam took the opportunity to move 25,000 tons of war materiel south.

Aug. 24-Sept. 4, 1967.

Cessation of attacks around Hanoi.

Jan. 29, 1968.

Unilateral 36-hour cease-fire for Tet. On Jan. 31, North Vietnam and the Viet Cong launched the Tet Offensive against bases all over South Vietnam.

March 31, 1968.

Halt of bombing north of 20th parallel. Under political pressure, the line was moved south to the 19th parallel.

Nov. 1, 1968-April 6, 1972.

Halt of all bombing of North Vietnam. Reconnaissance flights continued and attacks on them led to "protective reaction" strikes.

Jan. 15, 1973.

Suspension of mining, bombing, and other offensive operations against North Vietnam as Paris peace talks approached conclusion.

Jan. 28, 1973.

Cease-fire, prior to US disengagement from the war.

In addition, there were routine halts of 48 hours at Christmas and New Years, 1966-67 and 1967-68.

USAF Bomb Damage Assessment Claims in North Vietnam

	March 1965-October 1968		April 1972-January 1973	
	Destroyed	Damaged	Destroyed	Damaged
Vehicles	5,455	3,469	1,635	869
Tanks	—	—	38	20
Locomotives	17	59	1	6
Rail Rolling Stock	1,036	775	56	32
Watercraft	89	128	221	162
Bridges	1,305	1,794	250	55
Railroads	—	1,464 cuts	—	20 cuts
Roads	—	19,324 cuts	—	36 cuts
Ferry Slips	53	166	—	—
Oil Tanks	‡	‡	2,760	86
Buildings	5,938	4,570	1,207	369
Construction Equipment	—	—	35	32
Aircraft	96	25	36	6
Runways	—	19	‡	‡
AAA Sites	1,682	1,196	217	89
Field Artillery Areas	‡	‡	9	1
SAM Sites	80	93	40	5
Radar Sites	109	152	55	19



A Linebacker II strike by B-52s in December 1972 decimated this rail yard north of Hanoi.

Bomb damage assessment is both difficult and imprecise. These figures are better taken as a distribution of bombing effort rather than as an exact tally of the damage inflicted.

‡Targets bombed but not tallied in this period.

Source: Wayne Thompson, *To Hanoi and Back* (USAF).

USAF Operation Linebacker II Sorties

Dec. 18-29 1972

Aircraft	Sorties
A-7	226
F-4	274
F-111	140
B-52	724
Total	1,364

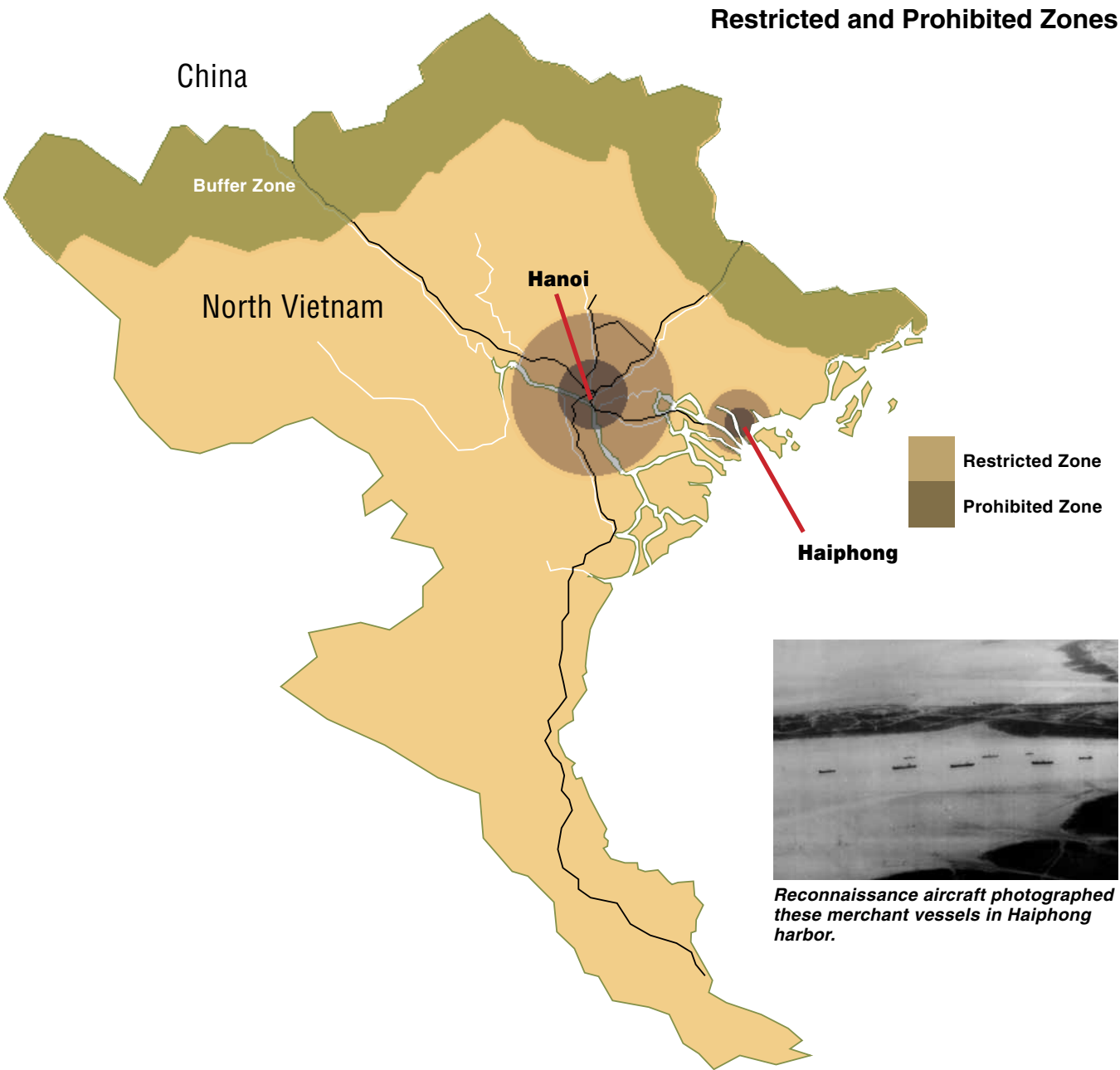
Linebacker II operations against Hanoi and Haiphong in 1972 are associated in popular memory almost exclusively with the B-52s, but other aircraft flew almost half the Air Force sorties.

Source: *The Air War in Southeast Asia* (Herman L. Gilder/University Press).

USAF Targets in Operation Linebacker II

Target	Percent of Sorties
Railroad yard	36
Storage facilities	25
Radio/communications	14
Power facilities	12
Airfields	10
SAM sites	2
Bridges	1

Source: *The Air War in Southeast Asia* (Herman L. Gilder/University Press).

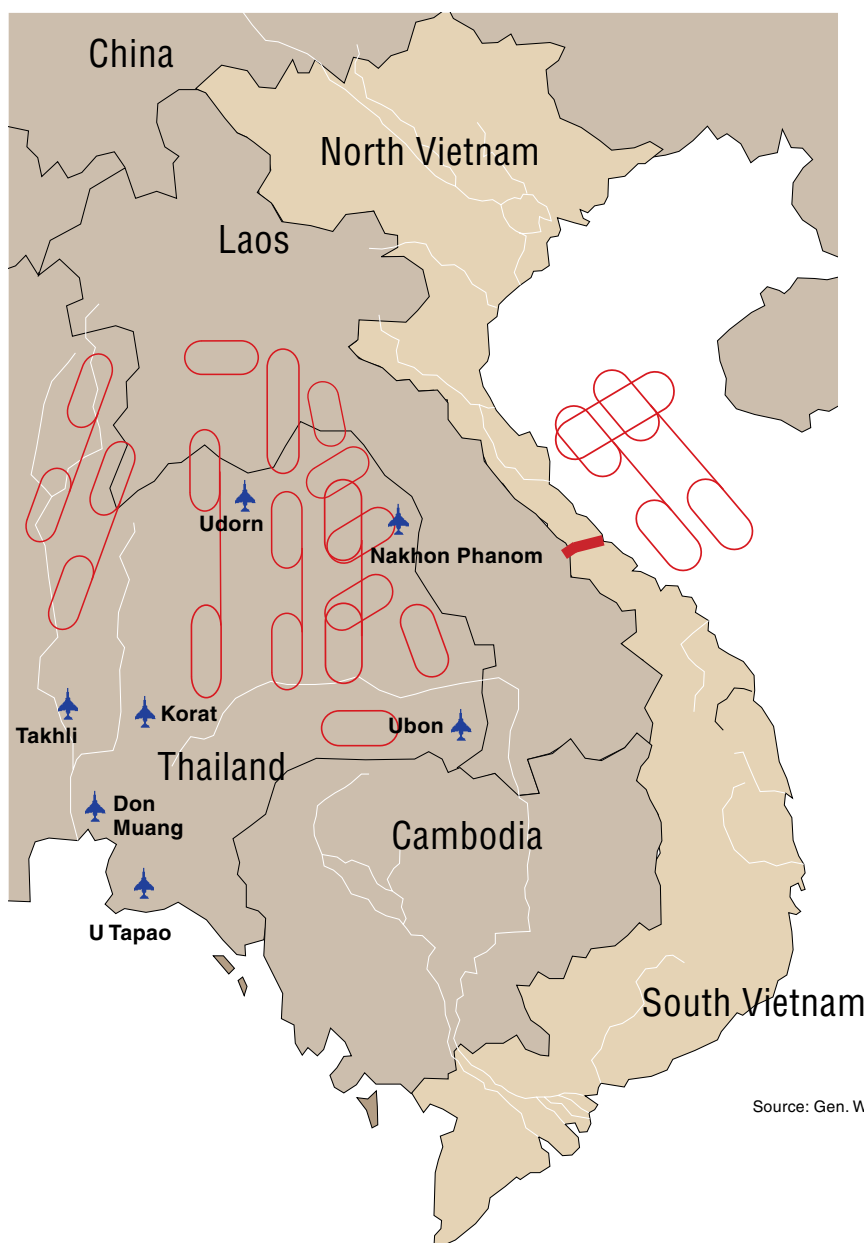


Reconnaissance aircraft photographed these merchant vessels in Haiphong harbor.

Air strikes around Hanoi and Haiphong were tightly constrained. Strikes in a prohibited zone required permission—seldom given—from Washington. Limitations in the restricted zone were severe and changed from week to week.

The prohibited zones were 20 miles wide at Hanoi and eight miles wide at Haiphong. They were surrounded by restricted zones, 60 miles wide at Hanoi and 20 miles wide at Haiphong.

Also, a buffer zone, about 25 miles wide, was established to prevent violations of the Chinese airspace. US aircraft could use it only to maneuver when positioning themselves to attack targets outside the buffer zone.



Aerial Refueling Tracks

One of the big operational changes in the Vietnam War was the everyday re-fueling of combat aircraft. Fighters on their way into North Vietnam topped up their tanks from KC-135 tankers, which flew orbits above Thailand, Laos, and the Gulf of Tonkin, then met the tankers again on the way out to get enough fuel to make it home. Aerial refueling more than doubled the range of the combat aircraft.

Source: Gen. William W. Momyer, *Airpower in Three Wars* (USAF).

Tankers and Tanker Sorties in Southeast Asia, 1965-72

	No. of tankers	Tanker Sorties	Fuel Offloaded (pounds)
1965	55	9,200	315 million
1966	75	18,200	850 million
1967	75	23,000	1.1 billion
1968	92	32,000	1.6 billion
1969	94	28,000	1.4 billion
1970	91	19,540	888 million
1971	51	14,400	619 million
1972	172	34,700	1.4 million
Total	88 avg.	179,040	8.2 billion

The KC-135 tankers in Southeast Asia belonged to Strategic Air Command, and their primary mission was to support SAC in its nuclear role. The additional requirement in Southeast Asia was a stretch of limited resources. The burden fell on the tanker aircrews, who pulled frequent temporary deployments to Southeast Asia and an extra workload when they returned home.

USAF Air Munitions Consumption

vs. World War II and Korean War

	Millions of Tons
World War II	2.150
Europe (1.613 million tons)	
Far East (0.537 million tons)	
Korean War	0.454
Vietnam War	6.166

Source: USAF Management Summary Southeast Asia, September 1973.



At left, airmen prepare bombs for loading aboard a B-52. The BUFF at right had the capacity to carry all the bombs pictured.

Designated USAF Campaigns of Vietnam Service

Vietnam Advisory	Nov. 15, 1961-March 1, 1965
Vietnam Defensive	March 2, 1965-Jan. 30, 1966
Vietnam Air	Jan. 31-June 28, 1966
Vietnam Air Offensive	June 29, 1966-March 8, 1967
Vietnam Air Offensive, Phase II	March 9, 1967-March 31, 1968
Vietnam Air/Ground	Jan. 22-July 7, 1968
Vietnam Air Offensive, Phase III	April 1-Oct. 31, 1968
Vietnam Air Offensive, Phase IV	Nov. 1, 1968-Feb. 22, 1969
Tet 69/Counteroffensive	Feb. 23-June 8, 1969
Vietnam Summer/Fall 1969	June 9-Oct. 31, 1969
Vietnam Winter/Spring 1970	Nov. 1, 1969-April 30, 1970
Sanctuary Counteroffensive	May 1-June 30, 1970
Southwest Monsoon	July 1-Nov. 30, 1970
Commando Hunt V	Dec. 1, 1970-May 14, 1971
Commando Hunt VI	May 15-Oct. 31, 1971
Commando Hunt VII	Nov. 1, 1971-March 29, 1972
Vietnam Cease-Fire	March 30, 1972-Jan. 28, 1973

The 17 campaigns designated by the Air Force differed in title and dates from those of the other services.

Source: Timothy Warnock, *Air Force Combat Medals, Streamers, and Campaigns* (USAF).

THE ENEMY

North Vietnamese Air Force Combat Aircraft Inventory

	MiG-15/17	Il-28	MiG-19	MiG-21	Total
August 1964	36				36
December 1964	53				53
May 1965	56	8			64
December 1965	62	6		7	75
April 1966	63	8		15	86
December 1966	50	6		16	72
April 1967	75	6		16	97
December 1967	28			12	40
May 1972	80		33	93	206
October 1972	66		40	39	145



MiG-17s such as these photographed in 1966 were mainstays of the North Vietnamese Air Force.

North Vietnam's aircraft losses were promptly replaced. The MiG-19, supplied by the Chinese, did not appear until after the 1968 bombing halt. Deployment of the Il-28 light bomber in 1965 created concern that it might be used to attack bases in South Vietnam, but that never happened.

Source: Gen. William W. Momyer, USAF (Ret.), *Air Power in Three Wars* (USAF).

North Vietnamese AAA

Number of Guns in Each Route Pack

October 1967–March 1968

Route Pack	1	2	3	4	5	6A	6B	Total
Oct. 24, 1967	1,411	533	550	784	693	2,238	910	7,119
Nov. 29, 1967	1,270	514	525	707	686	2,084	784	6,570
Dec. 20, 1967	1,190	526	539	673	698	2,104	815	6,545
Jan. 10, 1968	1,177	529	561	540	695	2,140	815	6,457
Feb. 10, 1968	1,137	340	418	615	695	2,124	962	6,291
March 20, 1968	1,065	360	440	609	672	1,712	937	5,795

Although the SAM and MiG threats got more attention, about 68 percent of the aircraft losses were to anti-aircraft fire. As of March 20, 1968, North Vietnam had anti-aircraft artillery at 1,158 sites. A total of 5,795 guns were deployed, of which 4,802 were 37 mm to 57 mm and 993 were 85 mm to 100 mm.

Source: Gen. William W. Momyer, USAF (Ret.), *Air Power in Three Wars* (USAF).

North Vietnamese SAM Effectiveness

	Missiles Fired	Aircraft Lost	Effectiveness
1965	194	11	5.7%
1966	1,096	31	2.8%
1967	3,202	56	1.75%
1968	322	3	0.9%
1972	4,244	49	1.15%



Enemy SAMs were a deadly threat. Shown here is the wreckage of a B-52 shot down near Hanoi.

North Vietnam deployed the Soviet-built SA-2 Guideline SAM in 1965. Its effectiveness diminished as US airmen developed defensive tactics, added electronic countermeasures, and sent "Wild Weasel" aircraft to destroy, deter, and intimidate the SAM batteries. A few SA-3s, effective at lower altitudes, were introduced later in the war, as were shoulder-fired SA-7s, which were deadly against slow-flying aircraft in South Vietnam.

Source: Gen. William W. Momyer, USAF (Ret.), *Air Power in Three Wars* (USAF).

Infiltration From North Vietnam, 1959-67

	Accepted	Possible	Total
1959-60	4,582		4,582
1961	6,295		6,295
1962	12,857		12,857
1963	7,906		7,906
1964	12,424		12,424
1965	8,050	25,680	33,730
1966	30,900	58,700	89,600
1967	29,800	52,400	82,200

A key part of North Vietnam's strategy was to insert troops and equipment into South Vietnam by way of the Ho Chi Minh Trail in Laos. This chart shows troop infiltration in the first part of the war. "Accepted" numbers are those that could be "reasonably confirmed." The actual total was considerably higher. "Possibles" are additional infiltrators that are believed to have moved south. Of the total shown here, 2,765 infiltrators may have been counted twice.

Source: *Interdiction in Southern Laos* (Jacob Van Staaveren/USAF).

North Vietnamese Airfields Jet-capable bases in 1973

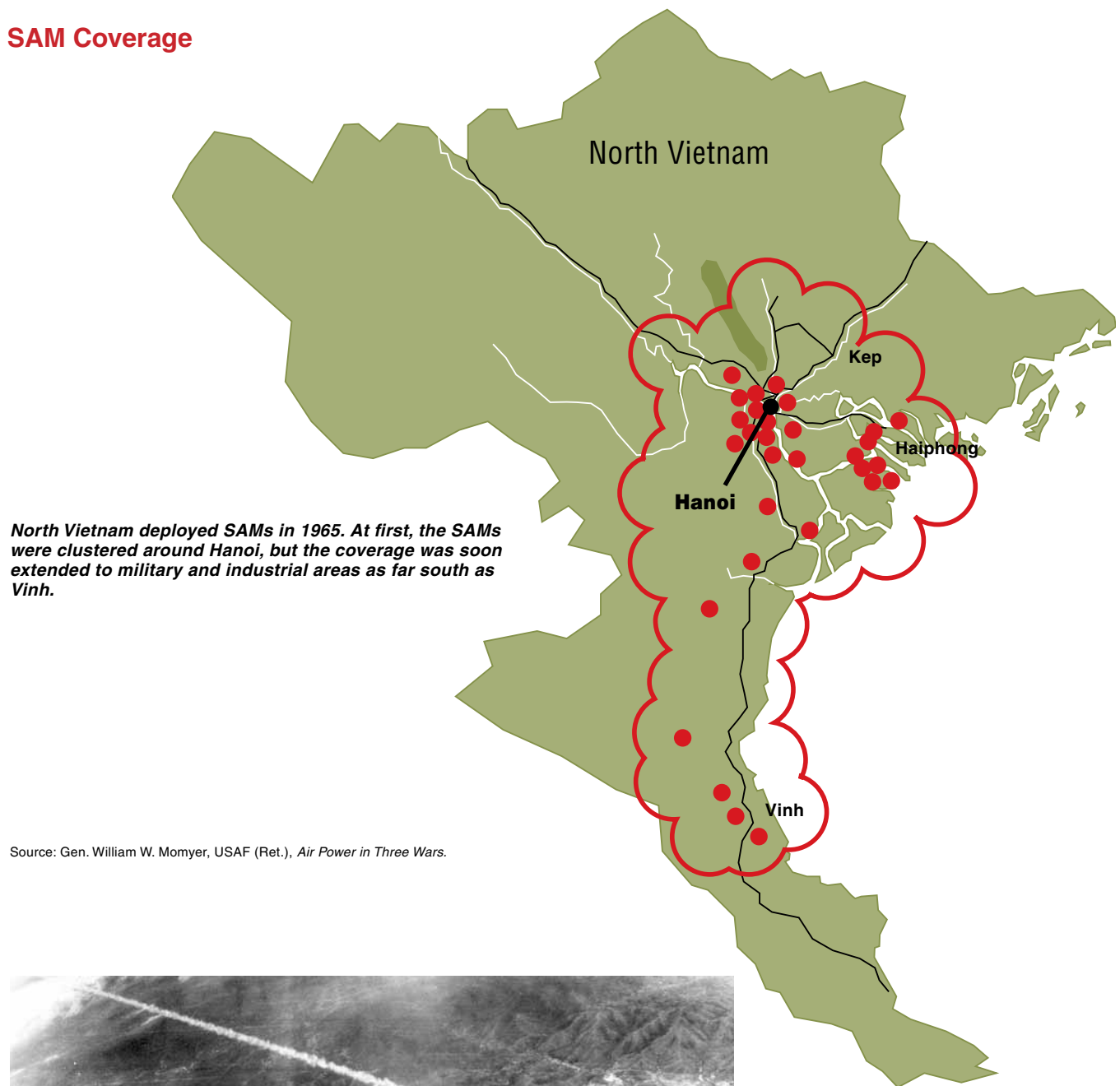
In 1965, North Vietnam based all of its MiGs at Phuc Yen, the only airfield that was suitable for jet operations. By the end of the war, there were 17 jet aircraft bases with more under construction.



An F-105 belly camera captured the first strike on Bac Mai airfield near Hanoi.



SAM Coverage



North Vietnam deployed SAMs in 1965. At first, the SAMs were clustered around Hanoi, but the coverage was soon extended to military and industrial areas as far south as Vinh.

Source: Gen. William W. Momyer, USAF (Ret.), *Air Power in Three Wars*.



An F-105 recorded the above image showing the contrail of a SAM passing close to another F-105 (circled) over North Vietnam. At right, another Soviet designed missile sits on its launcher in North Vietnam.



CASUALTIES AND LOSSES

US Casualties in the Vietnam War

Aug. 4, 1964–Jan. 27, 1973

	Battle Deaths	Other Deaths	Wounds Not Mortal
Army	30,922	7,273	98,802
Navy	1,631	931	4,178
Marines	13,084	1,753	51,392
Air Force	1,741	842	931
Total	47,378	10,799	153,303

Totals for “wounds not mortal” do not include 150,332 persons who did not require hospital care.

Source: Department of Defense.

USAF Aircraft Losses in Southeast Asia

Feb. 1, 1962–Oct. 31, 1973

Aircraft	Combat Losses			Operational Losses	Total Aircraft Losses
	North Vietnam	Other SEA	Total Combat Losses		
A-1	18	132	150	41	191
AC-47	—	17	17	2	19
AC-119	—	2	2	4	6
AC-130	—	6	6	—	6
B-52	18	—	18	12	30
B-57	5	33	38	18	56
C/UC-123	—	21	21	32	53
C-130	2	32	34	21	55
F-4	193	189	382	63	445
F-100	16	182	198	45	243
F-105	282	52	334	63	397
HH-3	3	7	10	4	14
HH-43	1	9	10	4	14
HH-53	1	8	9	1	10
O-1	2	120	122	50	172
O-2	3	79	82	22	104
OV-10	—	47	47	16	63
RF-4	38	38	76	7	83
RF-101	27	6	33	6	39
Other	16	132	148	107	255
Total	625	1,112	1,737	518	2,255

“Other SEA” includes Laos, South Vietnam, Thailand, and Cambodia. B-52 losses include two at Kadena AB, Japan, and two at Andersen AFB, Guam, while supporting Arc Light operations.

Source: USAF Operations Report, Nov. 30, 1973.



Many lives were saved by effective aeromedical evacuation. Here, an Air Force flight nurse attends to wounded marines transported from the battlefield.



A special operations forces gunner observes an HH-53 used for combat search and rescue missions.

USAF Aircraft Losses by Cause

Feb. 1, 1962-Oct. 31, 1973

Fiscal Year	Ground Fire	Ground Attack on Air Bases	Surface-to-Air Missiles	Aerial Combat	Other Combat	Operational	Total
1962-66	298	21	9	4	—	125	457
1967	276	6	26	16	—	77	401
1968	275	45	19	22	10	91	462
1969	234	14	—	—	1	77	326
1970	177	3	—	1	—	76	257
1971	73	1	2	—	—	27	103
1972	72	2	24	14	1	19	132
1973	38	4	30	10	9	25	116
1974	—	—	—	—	—	1	1
Total	1,443	96	110	67	21	518	2,255

Seven of the "other combat" losses shown here are listed in some accounts as aerial combat losses, which would raise that total to 74.

Source: USAF Operational Summary, November 1973.

Navy/Marine Corps Victories/Losses

Aircraft Downed in Air to Air Combat

Enemy Aircraft by USN/USMC	No.	USN/USMC Aircraft by Enemy	No.
AN-2	2	A-1	1
MiG-17	39	KA-3B	1
MiG-19	2	A-4C	1
MiG-21	18	RA-5C	1
		A-6A	2
		F-4B/J	7
		F-4C/D/G	0
		F-8C/D/E	3
Total	61	Total	16

Source: www.bluejacket.com

South Vietnamese Air Force Aircraft Losses

Jan. 1, 1964-Sept. 30, 1973

A-1	225
A-37	38
AC-47	9
C-7	6
C/EC-47	17
C/AC-119	8
C-123	11
CH/HH-34	140
CH-47	10
F/RF-5	18
O-1	152
O-2	2
T-41	1
U-6	10
U-17	39
UH-1	332
Total	1,018

Source: USAF Management Summary, 1973.

USAF Sortie/Loss Rate in Three Wars

	Sorties	Aircraft Losses	Loss Rate/1,000 Sorties
World War II	2,362,800	22,948	9.7
Korean War	710,886	1,466	2.0
Vietnam War	5,226,701	2,257	0.4

In Southeast Asia, the Air Force flew twice as many sorties as the Army Air Forces did in World War II, but sustained less than a tenth as many aircraft losses.

Source: John Schlight, *The War in South Vietnam* (USAF).

ACES AND HEROES

Vietnam War Aces

Number of Victories	Airman	Aircraft and Unit
6	Capt. Charles B. DeBellevue USAF, weapons system officer	F-4D (4), F-4E (2) 555th Tactical Fighter Squadron
5	Capt. Richard S. Ritchie, USAF, pilot	F-4D (3), F-4E (2) 555th TFS
5	Capt. Jeffrey S. Feinstein, USAF, WSO	F-4D (4), F-4E (1) 13th TFS
5	Lt. Randall H. Cunningham, USN, pilot	F-4J VF-96
5	Lt. William Driscoll, USN, WSO	F-4J VF-96

Note: USAF awarded a full credit each to a pilot and his WSO for one enemy aircraft shot down.

Sources: USAF, Internet.



Capt. Charles DeBellevue (far left) and Capt. Richard S. Ritchie. At right, Capt. Jeffrey Feinstein.

Air Force Medal of Honor Recipients

Name	Hometown	Date of Action	Place of Action
Bennett, Capt. Steven L.	Palestine, Tex.	June 29, 1972	Quang Tri, S. Vietnam
Day, Maj. George E.	Sioux City, Iowa	Conspicuous gallantry while POW	
Dethlefsen, Maj. Merlyn H.	Greenville, Iowa	March 10, 1967	Thai Nguyen, N. Vietnam
Fisher, Maj. Bernard F.	San Bernardino, Calif.	March 10, 1966	A Shau Valley, S. Vietnam
Fleming, 1st Lt. James P.	Sedalia, Mo.	Nov. 26, 1968	Duc Co, S. Vietnam
Jackson, Lt. Col. Joe M.	Newnan, Ga.	May 12, 1968	Kam Duc, S. Vietnam
Jones, Lt. Col. William A. III	Warsaw, Va.	Sept. 1, 1968	Dong Hoi, N. Vietnam
Levitow, A1C John L.	South Windsor, Conn.	Feb. 24, 1969	Long Binh, S. Vietnam
Pitsenbarger, A1C William H.	Piqua, Ohio	April 11, 1966	Cam My, S. Vietnam
Sijan, Capt. Lance P.	Milwaukee	Conspicuous gallantry while POW	
Thorsness, Maj. Leo K.	Seattle	April 19, 1967	N. Vietnam
Wilbanks, Capt. Hilliard A.	Cornelia, Ga.	Feb. 24, 1967	Dalat, S. Vietnam
Young, Capt. Gerald O.	Anacortes, Wash.	Nov. 9, 1967	Khe Sahn, S. Vietnam



Maj. Bernard Fisher was the first airman to receive the Medal of Honor in the Vietnam War.



First Lt. James Fleming (l) and Sgt. John Levitow receive their Medals of Honor from President Nixon.



Sketches of USAF Medal of Honor Recipients (Ranks at time of action.)



Capt. Steven L. Bennett.

On June 29, 1972, OV-10 pilot Bennett was supporting a South Vietnamese ground unit when his aircraft was hit by a SAM-7 missile. Unable to eject because his backseater's parachute was shredded, Bennett elected to ditch his aircraft in the Tonkin Gulf, although he knew no OV-10 pilot had ever survived a ditching. The aircraft flipped over, nose down in the water.

The backseater lived, but Bennett was trapped and sank with the aircraft. *MOH awarded posthumously, Aug. 8, 1974.*



1st Lt. James P. Fleming.

On Nov. 26, 1968, five UH-1 Hueys—three of them transports and two armed as gunships—responded to an emergency call for help from Green Berets in the South Vietnamese highlands. One gunship was shot down. Fleming, supported by the remaining gunship and flying a helicopter never designed for rescue work, went in through heavy ground fire and brought out the soldiers without a single casualty.

MOH awarded May 14, 1970.



Maj. George E. Day. Badly injured after his Misty FAC 100-F was shot down over North Vietnam Aug. 26, 1967, Day was captured and tortured. He escaped and reached the Demilitarized Zone. He tried to signal US aircraft, but was ambushed, recaptured, and imprisoned in Hanoi, where he continued to offer maximum resistance to his captors until released in 1973. *MOH awarded March 4, 1976.*



Lt. Col. Joe M. Jackson.

On May 12, 1968, three combat controllers were left behind as airlifters evacuated 1,500 soldiers from a camp in South Vietnam. The enemy was closing in, and one rescue attempt had failed. Jackson put his C-123 into a wrenching, high-speed, full-flaps dive, landed amid smoke and explosions, and brought the stranded airmen out through heavy mortar

fire. *MOH awarded Jan. 16, 1969.*



Capt. Merlyn H. Dethlefsen.

On March 10, 1967, four F-105 Wild Weasels led a strike force against the heavily defended Thai Nguyen iron works near Hanoi. The Weasel leader was shot down and a second Weasel departed with battle damage. Despite severe damage to his own aircraft, Dethlefsen led the remaining two Weasels in pass after pass to take out the SAMs. *MOH awarded Feb. 1, 1968.*



Lt. Col. William A. Jones, III.

Leading an A-1H Sandy mission on Sept. 1, 1968, to find a pilot down in North Vietnam, Jones took heavy battle damage when he attacked guns that were blocking the rescue attempt. His aircraft was badly shot up, the cockpit canopy blown away, and Jones was severely burned. Unable to use his radio, he declined to bail out and returned to base where he refused

medical care until he reported the exact position of the downed pilot, who was subsequently rescued. *MOH awarded Aug. 6, 1970.*



Maj. Bernard F. Fisher.

On March 10, 1966, Fisher and Maj. Dafford W. "Jump" Myers were flying Air Commando A-1Es in support of Special Forces under attack in the A Shau Valley of Vietnam. Myers was shot down and landed in flames on the airfield. Fisher ran the gauntlet of enemy artillery that ringed the valley, landed, taxied through burning debris, picked up Myers, and flew

out with 19 bullet holes in his airplane. *MOH awarded Jan. 19, 1967.*



A1C John L. Levitow.

On Feb. 24, 1969, Levitow was loadmaster on an AC-47, suppressing a mortar attack on Long Binh Army Base. A mortar shell riddled the fuselage with shrapnel. Levitow and another airman dropping magnesium illumination flares from the open cargo door were knocked down. A live flare fell inside the airplane, spewing toxic smoke, and was seconds

away from exploding. Levitow threw himself on the flare, crawled to the door, and tossed it outside, where it exploded. Levitow lived, but he had more than 40 shrapnel wounds. *MOH awarded May 14, 1970.*



A1C William Pitsenbarger. On April 11, 1966, Pitsenbarger, a pararescue jumper, descended from an HH-43 helicopter into the jungle near Bien Hoa to help US soldiers wounded in an intense firefight. As casualties increased, he passed up a chance to get out. He exposed himself to enemy fire at least three times, distributing ammunition and pulling soldiers to safer positions before he was

killed. *MOH awarded posthumously, Dec. 8, 2000.*



Capt. Lance P. Sijan. Sijan was severely injured Nov. 9, 1967, when his F-4C was blown out of the air on a night mission over Laos. He parachuted into trees on a mountain slope. Despite his injuries and lack of any real food, he evaded capture for more than six weeks. Caught, he escaped again, but was recaptured and tortured. While a POW, he contracted pneumonia and died. *MOH awarded*

posthumously, March 4, 1976.



Maj. Leo K. Thorsness. On one incredible mission, April 19, 1967, F-105 leader Thorsness destroyed two SAM sites, shot down a MiG-17, refueled, escorted the search for a downed aircrew, and attacked four MiG-17s, drawing them away from the location of the crew on the ground. *MOH awarded Oct. 15, 1973* — after Thorsness, shot down on a subsequent mission, returned from

almost six years as a POW.



Capt. Hilliard A. Wilbanks.

On Feb. 24, 1967, Wilbanks in an unarmed O-1, flying a forward air control mission in support of South Vietnamese Rangers, discovered a Viet Cong battalion waiting in ambush. He dived on them three times, shooting out his side window with an M-16 rifle, diverting the attack and drawing the VC fire toward himself. He was severely wounded, crashed, and

died before the rescue team could get him home. *MOH awarded posthumously, Jan. 24, 1968.*



Capt. Gerald O. Young.

On Nov. 9, 1967— with two helicopters already lost in a rescue operation in Laos—Young managed to land, but his HH-3E was shot down on takeoff and burst into flames. Young pulled one survivor from the wreckage and hid him. Realizing the enemy intended to use them as bait to draw in another helicopter, Young led the pursuers on a 17-hour chase

through the brush before rescuers got him out. *MOH awarded May 14, 1968.*

CHRONOLOGY

USAF and the Vietnam War From the Tonkin Gulf Incident to the Cease-Fire

US forces had been engaged in South Vietnam in support and advisory roles since 1961. The Tonkin Gulf incident in 1964 was the spark that led to combat operations. Within months, American forces were at war.

Aug. 2, 1964. The destroyer USS *Maddox* is attacked by North Vietnamese patrol boats in the Gulf of Tonkin.

Aug. 4, 1964. *Maddox* and USS *Turner Joy* report being attacked by several fast North Vietnamese ships far out to sea, though claims of an attack were soon disputed.

Aug. 5, 1964. In response to events of Aug. 2 and Aug. 4, President Johnson orders retaliatory air strikes against North Vietnam.

Aug. 7, 1964. Congress passes Tonkin Gulf Resolution, authorizing “all necessary steps, including the use of armed force,” to repel attack, prevent further aggression, and assist allies.

August 1964. USAF moves into Southeast Asia in force: B-57s from the Philippines to Bien Hoa, South Vietnam; additional F-100s to Da Nang, South Vietnam, on Aug. 5; 18 F-105s from Japan to Korat, Thailand, beginning Aug. 6.

Nov. 1, 1964. Viet Cong mortar attack on Bien Hoa kills four Americans, and wounds 72. Five B-57s destroyed, 15 damaged; four VNAF A-1s destroyed or damaged.

Dec. 1, 1964. A National Security Council interagency working group forwards options—including reprisals in North Vietnam for attacks in the south and increased air activity against North Vietnamese infiltration routes in Laos—to President Lyndon B. Johnson.

Dec. 14, 1964. US Air Force flies the first Operation Barrel Roll armed reconnaissance mission in Laos.



AT-28s were used for close air support in the “advisory” years, often with a USAF pilot in front.

Feb. 7, 1965. Viet Cong attack air bases in South Vietnam. At Pleiku, eight Americans are killed, more than 100 wounded.

Feb. 7-11, 1965. In Operation Flaming Dart, Air Force, Navy, and South Vietnamese aircraft strike targets in North Vietnam in retaliation for Feb. 7 attacks on bases in the south.

March 2, 1965. Operation Rolling Thunder, the sustained air campaign against North Vietnam, begins. It will end with the bombing halt, Oct. 31, 1968.

March 8, 1965. US Marines deploy to Da Nang to defend the air base. First US ground forces in Vietnam.

April 3, 1965. Operation Steel Tiger, interdiction of Ho Chi Minh Trail in the Laotian Panhandle, begins.

April 3-4, 1965. Air Force F-105s strike the Thanh Hoa Bridge, one of the most difficult targets of the war. They inflict damage, but fail to drop a span.

April 5, 1965. Surface-to-air missile (SAM) sites first detected in North Vietnam. US loses first aircraft to Soviet-built SAM on July 24.

June 18, 1965. First Arc Light mission: SAC B-52s, flying from Guam, are used for the first time in Vietnam, when 28 aircraft strike Viet Cong targets near Saigon.

June 25, 1965. Commander of Air Force’s 2nd Air Division given additional post as MACV deputy commander for air operations.

July 10, 1965. Capt. Thomas S. Roberts, with his back-seater Capt. Ronald C. Anderson, and Capt. Kenneth E. Holcombe, with his back-seater Capt. Arthur C. Clark, both flying F-4C



A 1965 Viet Cong attack on a base in South Vietnam.



An enemy supply truck traveling at night on the Ho Chi Minh Trail missed the right ford for the stream.

Phantom IIs, shoot down two MiG-17s, the first Air Force air-to-air victories of the Vietnam War.

Aug. 24, 1965. US loses first aircraft, an F-4C, to Soviet-built SAMs.

Dec. 10, 1965. US Pacific Command divides North Vietnam into six “route packages,” assigns four of them to the Navy and two to the Air Force. Route Pack 6 is later divided into 6A (Air Force) and 6B (Navy). In April 1966, operational control of Route Pack 1 was assigned to MACV.

Dec. 22, 1965. F-100F Wild Weasels knock out a North Vietnamese Fan-Song radar at the Yen Bai rail yards north of Hanoi, while the F-105s they were escorting destroy the nearby SA-2 SAM site. This attack marked the first success for the Wild Weasel program.

Dec. 23, 1965-Jan. 23, 1966. In Operation Blue Light, 231 C-141 flights airlift 3,000 troops and 4,700 tons of cargo from Hawaii to Pleiku.

Jan. 1, 1966. Military airlift units of the Air National Guard begin flying some 75 cargo flights a month to Southeast Asia. These flights are in addition to the more than 100 overseas

missions a month flown by the ANG in augmenting Military Airlift Command’s global airlift mission.

March 4, 1966. A flight of Air Force F-4C Phantoms is attacked by three MiG-17s in the first air-to-air combat of the war over North Vietnam. The MiGs make unsuccessful passes before fleeing to the sanctuary of the Communist capital area.

April 1, 1966. Seventh Air Force, with headquarters at Saigon, is organized as a subcommand of Pacific Air Forces.

April 12, 1966. Strategic Air Command B-52 bombers strike targets in North Vietnam for the first time. They hit a supply route in the Mu Gia Pass, about 85 miles north of the border.



Photo by Tom Gernscheid via Warren Thompson

F-111s flew their first combat mission against targets in North Vietnam in March 1968.

June 29, 1966. For the first time, Air Force and Navy aircraft—F-105s and A-4s—attack the Hanoi and Haiphong POL complex.

Sept. 3, 1966. North Vietnam sends MiG-21s up in force for the first time.

Jan. 2, 1967. In the famous “MiG Sweep” Operation Bolo mission, F-4s from Ubon, Thailand, down seven North Vietnamese MiG-21s over the Red River Valley in North Vietnam.

March 10, 1967. Air Force F-105s and F-4Cs bomb the Thai Nguyen steel plant in North Vietnam for the first time.

April 10, 1967. The first B-52 bombing mission is flown from U Tapao AB, Thailand.

April 26, 1967. US aircraft finally strike MiG airfields at Kep and Hoa Lac—long forbidden as targets—but Phuc Yen and Gia Lam air bases, closer to Hanoi, remain off limits.

Aug. 11, 1967. USAF F-105s knock out the center span (and damage two others) of the mile-long Paul Doumer rail bridge north of Hanoi, a vital supply route and one of the



Strategic airlift, as provided by these C-141s, was critical to the war effort.

most heavily defended targets in North Vietnam. The bridge is closed for two months. Air Force bombs cut it again in October and December.

Oct. 24, 1967. US airplanes attack North Vietnam's largest air base, Phuc Yen, for the first time in a combined Air Force, Navy, and Marine strike.

Nov. 17-Dec. 29, 1967. In Operation Eagle Thrust, C-141s and C-133s airlift 10,355 paratroopers and 5,118 tons of equipment from Ft. Campbell, Ky., to Bien Hoa, South Vietnam.

Jan. 1, 1968. Battle of Khe Sanh begins. Air Force airlifters bring in an average of 165 tons of materiel daily during the 77-day siege.

Jan. 29, 1968. US and South Vietnam begin unilateral 36-hour cease fire for Tet religious holiday.

Jan. 31, 1968. In massive Tet Offensive, North Vietnamese and Viet Cong attack bases all over South Vietnam, and undercut confidence and support for the war by the American public.

March 25, 1968. F-111s fly their first combat mission against military targets in North Vietnam.

March 31, 1968. President Johnson announces a partial halt of bombing missions over North Vietnam and proposes peace talks. The halt initially applies above the 20th parallel, but is soon moved south to the 19th parallel. Later in the year, this halt merges into a broader bombing halt.

Oct. 31, 1968. Operation Rolling Thunder ends.

Nov. 1, 1968. President Johnson halts all bombing of North Vietnam. Reconnaissance missions continue, as do "protective reaction" strikes if reconnaissance flights are fired upon.

March 18, 1969. "Menu" operations begin. B-52s, operating under "special security and reporting procedures," bomb North Vietnamese and Viet Cong sanctuaries in Cambodia. Between March 18, 1969, and May 20, 1970, the B-52s fly 4,308 sorties in Cambodia.



Base security was critical. There were enemy incursions such as the one that destroyed this F-4.



C-130s helped resupply the Marine garrison under siege at Khe Sanh.

October 1969. *Air Force Magazine* cover story, "The Forgotten Americans of the Vietnam War," ignites national concern for the prisoners of war and the missing in action. It is reprinted in condensed form as the lead article in the November 1969 issue of *Reader's Digest* and is inserted into the *Congressional Record* six times.

Feb. 17, 1970. B-52s bomb targets in northern Laos for the first time.

March 6, 1970. US military involvement in Laos is publicly acknowledged for the first time in a statement by President Richard M. Nixon.

Nov. 21, 1970. A special task force of Air Force and Army volunteers makes a daring attempt to rescue American servicemen from the Son Tay POW camp about 20 miles west of Hanoi.

March 30, 1972. North Vietnam launches Easter Offensive, crossing the DMZ with more than 40,000 troops and 400 armored vehicles. Other prongs of the invasion strike into the Central Highlands and in the provinces north of Saigon. The invasion is stopped and then turned back by US airpower.

April 6, 1972. Bombing of North Vietnam, halted since Nov. 1, 1968, resumes.

April 27, 1972. USAF F-4s strike Thanh Hoa Bridge with 2,000-pound TV-guided bombs, closing the bridge to traffic. Previously, 871 conventional sorties resulted in only superficial damage to the bridge.

May 10, 1972. Operation Linebacker I—the sustained bombing of North Vietnam—begins.

May 11, 1972. USAF F-4s close the Doumer Bridge with laser guided bombs (LGBs) and 2,000-pound bombs.

May 13, 1972. Fourteen Air Force F-4s, with varying loads of 3,000-pound and 2,000-pound LGBs plus 500-pound gravity bombs, strike Thanh Hoa Bridge, taking out a span. The bridge is unusable for rail traffic for the rest of the year.

Aug. 28, 1972. Capt. Richard S. Ritchie, with his backseater, Capt. Charles B. DeBellevue, shoots down his fifth MiG-21 near Hanoi, becoming the Air Force's first ace since the Korean War.

Dec. 18, 1972. President Nixon directs the resumption of full-scale bombing and mining in North Vietnam.

Dec. 18, 1972. The US begins Operation Linebacker II, the 11-day bombing of Hanoi and Haiphong. Massive air strikes help persuade North Vietnam to conclude Paris peace negotiations.

Dec. 18, 1972. SSgt. Samuel O. Turner, the tail gunner on a Boeing B-52D bomber downs a trailing MiG-21 with a blast of .50-caliber machine guns near Hanoi. Six days later, A1C Albert E. Moore, also a B-52 gunner, shoots down a



Operation Homecoming saw the return of 591 US POWs who had been held until war's end.



A B-52 takes off for a Linebacker II sortie, as other BUFFs line the field at Andersen AFB, Guam.

MiG-21 after a strike on the Thai Nguyen rail yard. These were the only aerial gunner victories of the war.

Jan. 15, 1973. The Air Force suspends all mining, bombing, and other offensive operations against North Vietnam.

Jan. 27, 1973. The United States, South Vietnam, North Vietnam, and Viet Cong sign cease-fire in Paris. It becomes effective Jan. 28 in Vietnam.

Jan. 28, 1973. Cease-fire in Vietnam.

Feb. 12, 1973. Operation Homecoming, the return of 591 American POWs from North Vietnam, begins. All of the ex-POWs, who come from all military services, are processed through Clark AB, Philippines, to military hospitals in the United States, and, from there, they are quickly reunited with their families.

Feb. 21, 1973. Laotians sign cease-fire. Bombing operations are halted, but communist cease-fire violations lead to B-52 strikes, which continue into April.

March 29, 1973. MACV disestablished. Seventh Air Force moves to Nakhon Phanom AB, Thailand, takes on dual role as US Support Activities Group and 7th Air Force. Seventh/13th Air Force reverts to Det. 7 of 13th Air Force.

April 17, 1973. Taking off from Guam, B-52s make the last bombing missions over Laos, attacking targets south of the Plain of Jars because of communist cease-fire violations.

Aug. 15, 1973. B-52s fly last Arc Light sortie in Cambodia.

Aug. 15, 1973. Air Force A-7Ds fly last US combat mission of the war, attacking targets near Phnom Penh late in the afternoon. An EC-121 from Korat, landing after the A-7s return, earns the distinction of flying the last US mission of the war.



A flight of B-52s drops bombs on targets in North Vietnam.

April 30, 1975. Saigon falls to North Vietnamese forces, finally bringing the long conflict in Southeast Asia to an end.

PERSPECTIVES

Recommended Reading

"AIR FORCE MAGAZINE PERSPECTIVES on Vietnam," www.afa.org/magazine/perspectives/vietnam.asp (Links to more than 50 articles).

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Words From the War

Air America. CIA proprietary airline, flew clandestine missions in Southeast Asia.

Bear. Backseater in an F-105G.

Bingo. Just enough fuel left to reach home base or the tanker.

FAC. Forward air controller.

Fan Song. The radar for the SA-2 SAM.

Flak trap. An ambush, sometimes baited with fraudulent calls for help or dummy missile sites, that sought to draw US aircraft within range of concealed anti-aircraft artillery.

Frag. Fragmentary order, that portion of the overall 7th Air Force operations order that gave the wing its daily tasking. Aircraft were then "fragged" against the targets.

GIB. "Guy in Back," the backseater in an F-4.

Gomer. Enemy moving on the ground; originally, "guys on motorable enemy routes."

Gunship. Aircraft with side-firing guns, flying a pylon turn above the target and focusing its firepower continuously on the same point. AC-47 Spooky, AC-119 Stinger, and AC-130 Spectre.

Hootch. Living quarters at Southeast Asia bases.

Jolly. HH-3 Jolly Green Giant rescue helicopter.

Lima site. Rough landing strip in Laos. There were about 400 Lima sites.

Number 10. Bad; the worst.

PJ. Pararescue jumper (or parajumper; usage was always the abbreviation, never the full word) on rescue helicopter.

River Rats. The Red River Valley Fighter Pilots Association; airmen who flew missions in Route Pack 6.

Sandy. Propeller-driven A-1H escort on search and rescue missions.

Sierra Hotel. Phonetic alphabet form of fighter pilot's favorite expression ("____ hot!") for "very good."

Wild Weasel. Aircraft and crews that found and destroyed SAM sites.

Winchester. Out of ammunition.

The World. The USA; home.

Web Sites Featuring Vietnam War Topics

Air Force Association/*Air Force Magazine*

www.afa.org/magazine/perspectives/vietnam.asp (Select Vietnam War from list at www.airforce-magazine.com/MagazineArchive/Pages/Perspectives.aspx)

Air Force Historian

www.airforcehistory.hq.af.mil/PopTopics/vietnam.htm

Air Force Museum

www.wpafb.af.mil/museum/history/vietnam/vietnam.htm

Texas Tech University Virtual Vietnam Archive

www.vietnam.ttu.edu/virtualarchive

Places

Doumer Bridge. Longest bridge in North Vietnam—5,532 feet—over Red River at Hanoi; key choke point on the rail line to and from China.

DMZ. The Demilitarized Zone (in theory, anyway), five miles wide, established between North Vietnam and South Vietnam by the Geneva Conference in 1954.

Dragon's Jaw. The powerful 540-foot road and rail bridge over the Song Ma River at Thanh Hoa, strongly wedged between two hills. One of the most difficult targets of the war.

Hoa Lo. The “Hanoi Hilton,” the big prison in downtown Hanoi where most of the POWs were held.

Khe Sanh. Outpost near the DMZ where US Marines, supported by airpower, withstood a 77-day siege in 1968.

Monkey Mountain. Command and control center near Da Nang for operations over North Vietnam.

PDJ. *Plaine de Jarres*, or the Plain of Jars. Crossroads of the war in northern Laos.

Phuc Yen. North Vietnam's largest air base, 15 miles northwest of Hanoi.

SAM 7 Alley. Area between Quang Tri and Hué where shoulder-launched SAM-7 missiles posed great danger to low-flying aircraft.

Thai Nguyen. Industrial complex 35 miles north of Hanoi; power plant, rail yard, and North Vietnam's only steel mill.

Thud Ridge. Line of Hills northwest of Hanoi, used by F-105s to screen themselves from radar.

Vinh. Jump-off point for the Ho Chi Minh Trail. From Vinh, convoys moved through the Mu Gia and Ban Karai Passes and down the other side of the mountains.

Yankee Station. Position in South China Sea, east of Da Nang, from which carriers launched sorties over North Vietnam.

Factoids

Aces. The US Air Force and Navy together had five aces in the Vietnam War. North Vietnam had 16. One difference was that the North Vietnamese pilots flew in combat year after year, whereas the Americans left at the end of their tours.

Air National Guard. Guard aircraft and aircrews flew 30,000 sorties and 50,000 combat hours in the Vietnam War.

Hanoi Hannah. In the tradition of Axis Sally, Tru Huong broadcast from North Vietnam in English to American GIs. Her program consisted of American music and communist propaganda. After the war, Hanoi Hannah/Tru Huong became a TV personality in Saigon/Ho Chi Minh City.

Pilot losses. According to the *Pentagon Papers*, the air campaign against heavily defended areas cost one pilot in every 40 sorties.

Vietnamese casualties. Between 1959 and 1975, more than four million Vietnamese—about 10 percent of the population—were killed or wounded in the war.

Vietnam Veterans Memorial. Dedicated in 1982 in

Washington, D.C. The names of the Vietnam War dead are inscribed on a black granite wall.

The Vietnam Service Medal. Awarded to those serving from July 4, 1965, through March 28, 1973. Those who received the Armed Forces Expeditionary Medal for Vietnam service between July 1, 1958, and July 3, 1965, could apply to have it converted to the Vietnam Service Medal.

Colonel Toon. One of the enduring fables of the war was Colonel Toon (or Tomb), supposedly North Vietnam's leading air ace with 13 victories and supposedly shot down by US Navy ace Lt. Randall H. Cunningham in 1972. In actuality, Colonel Toon did not exist.

Triple canopy jungle. Roads and activities in many parts of Southeast Asia were concealed by thick foliage, with treetops basically at three levels: 50 feet, 100 feet, and 150 feet.

Air rescue. Air Rescue and Recovery Service crews saved 4,120 people in the Vietnam War—2,780 of them in combat situations.

PIECES OF THE WAR

AIR COMMANDOS

In the early part of the Vietnam War, the US Air Force reintroduced several types of propeller-driven aircraft. Among them was the Douglas A-1 Skyraider, a Navy attack bomber adapted for use by the South Vietnamese Air Force and by US Air Force for Air Commando squadrons and other units. A-1Es had two seats, A-1Hs only one.

The A-1E “Spad” could carry four tons of bombs and had four cannons. Maximum speed was 325 mph, but it could stay in the battle area for much longer than jet aircraft could, and it flew at low altitudes. It was ideal for close air support missions. The A-1H “Sandy” version flew escort for rescue operations.

On March 10, 1966, **Maj. Bernard F. Fisher** (left in photo at right) and **Maj. Dafford Myers** (right, right) were flying Air Commando A-1Es on an attack mission in support of Special Forces under attack in the A Shau Valley of South Vietnam. Myers was shot down and crash-landed in flames on the



airfield. Fisher ran the gauntlet of enemy artillery that ringed the valley, landed, taxied through burning debris, picked up Myers, took off through the smoke and automatic weapons fire, and flew out with 19 bullet holes in his airplane. Fisher was awarded the Medal of Honor.

On Sept. 1, 1968, **Lt. Col. William A. Jones III**, leading an A-1H mission to find a fighter pilot who had been shot down over North Vietnam, took heavy battle damage when he attacked enemy guns that were blocking the rescue effort. His aircraft was badly shot up. The cockpit canopy was blown away, and Jones was severely burned. Unable to use his radio, he declined to bail out and flew back to his base, where he refused sedation and medical care until he reported the exact position of the downed pilot, who was subsequently rescued. Jones was awarded the Medal of Honor.



TACTICAL RECONNAISSANCE

THE SR-71 Blackbird and other strategic reconnaissance platforms flew in Southeast Asia, but the information they collected was geared mostly to the needs of the national intelligence agencies. For day-to-day targeting information and bomb damage assessment, 7th Air Force relied on its own tactical reconnaissance aircraft.

The RF-101C Voodoo, which had flown low-level reconnaissance missions during the Cuban Missile Crisis, was the workhorse in the early years in Vietnam. From 1967 on, RF-4Cs took over most of the tactical reconnaissance jobs in Southeast Asia. Both the RF-101 and the RF-4 were variants of fighters, but they had significantly longer noses to house their cameras and electronic equipment.

The RF-101 collected the photographic intelligence required for air strikes against North Vietnam, which began in February 1965. To get pictures of the SAM sites, the RF-101s came in low and fast, popped up for the film run, then dived back down for the getaway. They were faster than the MiG-17s, but not as fast as the MiG-21s. The RF-4C, a better match for the MiGs, began flying



the missions in the North, and the Voodoos were employed in Laos and South Vietnam until their service in the war ended in 1970. Thirty-three RF-101s were lost in combat.

The RF-4C packed cameras, mapping radar, and infrared imaging equipment. It had a number of innovative features, including an ejectable film cassette, but that did not work well in Southeast Asia, where the standard procedure was fast film processing when the airplane landed. RF-4C cameras had good resolution at high altitudes, but weather and the triple canopy jungle tended to keep the operations lower to the ground. The aircraft continued to fly missions over North Vietnam, typically without escort. Seventy-six RF-4Cs were lost in combat in Vietnam, most of them to antiaircraft artillery, but none were shot down by MiGs. The RF-4C set the standard for aerial photo reconnaissance and was still in service for the Persian Gulf War in 1991.

RESCUE AND RECOVERY

HELICOPTERS came into their own during the Vietnam War. For the Air Force, their most noted role was rescue and recovery of aircrews and others on the ground in hostile territory. Pararescue jumpers, known as “PJs,” descended from the hovering helicopters to bring out the wounded.

Early on, the HH-43 utility helicopter was used for rescue. It was succeeded by the fabled HH-3E Jolly Green Giant—the name was inspired by its green and brown camouflage—and the HH-53C Super Jolly. The versatile UH-1 Huey was employed by the Army and the Air Force in a number of roles, including rescue.

On April 11, 1966, **A1C William H. Pitsenbarger**, (below) a pararescue jumper, descended from an HH-43 helicopter into the jungle near Bien Hoa, South Vietnam, to help US Army wounded in one of the most intense firefights of the war. As casualties increased, he passed up a chance to get out, staying on the ground with the wounded soldiers. He exposed himself to enemy fire at least three times, distributing ammunition and pulling soldiers to safer positions before he was killed. After more than 30 years, Pitsenbarger was awarded the Medal of Honor in 2000.



On Nov. 9, 1967, two helicopters had already been lost trying to rescue wounded soldiers in the Laotian panhandle. **Capt. Gerald O. Young** managed to land his HH-3E and take the wounded aboard, but he was shot down on takeoff. The helicopter burst into flames. Badly burned himself, Young pulled one surviving crew member to safety. Realizing that the enemy intended to use them as bait to pull in another helicopter, Young hid his comrade—who was subsequently rescued—and led his pursuers on a 17-hour chase through the brush before rescuers got him out. Young was awarded the Medal of Honor.

On Nov. 26, 1968, a flight of five UH-1 Hueys—three of them transport models and two armed as gunships—were returning to home base when they responded to an emergency call for help from a Green Beret team in the South Vietnamese highlands. One of the gunships was shot down by ground fire. After repeated attempts and supported by the remaining gunship, **Lt. James P. Fleming**, flying a helicopter never designed for rescue work, went in through extremely heavy ground fire and brought the soldiers out without a single casualty. Fleming was later awarded the Medal of Honor.

TACTICAL AIRLIFT

TACTICAL airlift was the glue that held the widely dispersed force in Southeast Asia together. Initially, the workhorse of the airlift mission was the C-123 Provider, which had previously been declared obsolete and scheduled for retirement. The C-123 “Mule Train” was the lifeline of the Vietnamese ground forces in the early 1960s, and when Americans began arriving in big numbers, the 123s supported and sustained them as well.

After 1965, the C-130 Hercules, which carried triple the payload of the 123, dominated the tactical airlift mission, but the C-7 Caribous—which the Air Force took over from the Army in 1966—and the C-123s continued to work the smaller and more remote locations.

Tactical airlifters were especially noted for their performance at Khe Sanh, where they delivered 165 tons of cargo a day to 6,000 US Marines, besieged for 77 days by the North Vietnamese Army, which hoped to starve them out. The C-130s airdropped most of the supplies, but as incoming fire intensified, it was mostly the C-123s that landed at Khe Sanh with items that could not be airdropped and to evacuate casualties and other personnel.



By 4 p.m. on May 12, 1968, Air Force airlifters had evacuated 1,500 soldiers under attack at a camp in South Vietnam. The rescue was declared over, but three Air Force combat controllers had been left behind. An airplane went in, but was unable to rescue the airmen. Would **Lt. Col. Joe M. Jackson** and his C-123 crew try? Jackson knew the enemy gunners would be expecting a regular approach, so he put his C-123 into a wrenching high-speed, full-flaps dive from 9,000 feet. The flaps held, and he landed amid smoke and explosions. A rocket bounced 10 feet away, but failed to explode. The airmen scrambled aboard and, dodging the debris, Jackson took off under heavy mortar fire, bringing all hands out safely. He was awarded the Medal of Honor.



STRIKE MISSIONS



Photo via Robert Dorr

THE F-105—the Thunderchief, the Lead Sled, the Thud—was the signature airplane of the “Rolling Thunder” campaign against North Vietnam from 1965 to 1968. Thuds, operating out of bases in Thailand, flew 75 percent of the strikes and took more losses over North Vietnam than any other type of aircraft. When Rolling Thunder ended, more than half of the Air Force’s F-105s were gone.

The F-105 was originally designed to deliver nuclear weapons. It could carry more bombs than a World War II B-17. It was fast when penetrating at low levels, but was not maneuverable at higher altitudes. Nevertheless, the F-105 managed to shoot down 27 North Vietnamese MiGs, most of them with its 20mm cannon.

Thuds also teamed early in the war with F-100Fs in “Iron Hand” missions to suppress surface-to-air missile sites. Later, two-seat “Wild Weasel” F-105s replaced the F-100s. Finding and destroying SAMs was one of the most dangerous missions of the war.



On March 10, 1967, four F-105 Wild Weasels preceded a strike force in an attack on the heavily defended Thai Nguyen iron works near Hanoi. The Weasel leader was shot down and another Weasel departed with battle damage. Evading MiGs and ground fire and despite severe battle damage to his own aircraft, **Capt. Merlyn H. Dethlefsen** (above, right of President Johnson) led the remaining two Weasels in pass after pass to take out the lethal SAMs. Dethlefsen was awarded the Medal of Honor.

On one incredible mission on April 19, 1967, F-105 leader **Maj. Leo K. Thorsness** (below with President Nixon) destroyed two SAM sites, shot down a MiG-17, refueled, escorted searchers to the location of a downed aircrew, and attacked and drew away four MiG-17s that were in the vicinity of the downed crew. Eventually, Thorsness would be awarded the Medal of Honor for his actions on April 19, but only 11 days later, he was shot down, taken captive, and spent almost six years as a prisoner of war.



COMMAND AND CONTROL

THE elegant Lockheed Constellation—its profile easily recognizable by its three tail fins—had a distinguished record of airline and military service, beginning in the 1940s. A specially built Constellation, “Columbine II,” was President Eisenhower’s personal airplane from 1954 to 1961.

The EC-121 was a radar-picket variation of the Constellation, in service with Air Defense Command in the 1950s as an aerial extension of the Distant Early Warning (DEW) Line. Two variants of it flew unusual missions from Korat Air Base, Thailand, in the Vietnam War.



The EC-121D flown by the College Eye Task Force had radomes above and below the fuselage and packed six tons of electronic gear. In their primary mission, these EC-121s flew elliptical orbits over the Tonkin Gulf, their powerful radars collecting and reporting data on air activity in North Vietnam. In 1967, an EC-121 controlled the intercept of a Mig-21 by a US fighter, which had never been accomplished before in combat. After China complained that US aircraft had violated its borders, College Eye took on

the job of warning airmen if they were too close to Chinese territory. On Aug. 15, 1973, a College Eye EC-121 had the distinction of flying the last USAF mission of the Vietnam War.



The “Bat Cat” EC-121Rs had camouflage but no radomes. They flew in support of “Igloo White,” an operation that seeded the Ho Chi Minh Trail with sensors to detect troop and vehicle traffic. The EC-121s, on missions that lasted about 10 hours, orbited the Trail, picking up signals and relaying them to Task Force Alpha at Nakhon Phanom or passing them directly to 7th Air Force in Saigon. The intelligence was used to direct gunships and other attack aircraft against the trucks or troops. A Pave Eagle U-22 “Mini-Bat” drone was developed as an alternative to the EC-121 as a signal collection platform, but it never flew an operational mission without a pilot.

FORWARD AIR CONTROLLERS

FORWARD air controllers found and marked targets, called in attack aircraft, and provided information and direction in the battle area. In the early days in South Vietnam, the FACs were O-1 Bird Dogs, operating low and slow with a top speed of 115 mph. They carried smoke rockets, but no armament. O-2 Skymasters were a little bigger and a little faster, but still had no ordnance. The twin-turboprop OV-10, introduced in 1968, was considerably sturdier, mounted four 7.62mm machine guns, and had a maximum speed of 281 mph. Eventually, “fast FACs” were introduced for operations in North Vietnam and higher threat areas. The first of them were “Misty” F-100s, which were superseded by F-4 FACs.



On June 29, 1972, OV-10 pilot **Capt. Steven L. Bennett** was attacking North Vietnamese regulars who were about to overrun a South Vietnamese ground unit when his aircraft was hit by a SAM-7 missile round. Unable to eject because his backseater's parachute was shredded, Bennett elected to ditch his aircraft in the Gulf of Tonkin—although he knew that no OV-10 pilot had ever survived a ditching. The aircraft flipped over, nose down in the water. The backseater lived, but Bennett was trapped in the smashed cockpit and sank with the airplane. He was awarded the Medal of Honor.



On Feb. 24, 1967, **Capt. Hilliard A. Wilbanks** in an unarmed O-1 was flying a forward air control mission in support of South Vietnamese Rangers. He spotted a Viet Cong battalion waiting in ambush on a hillside, marked the position with smoke rockets, and called in an air strike. Discovered, however, the Viet Cong attacked immediately. Three times, Wilbanks dived on them, shooting out his side window with an M-16 rifle. He succeeded in diverting the attack—and in drawing the VC fire toward himself. Severely wounded, he crashed nearby. Meanwhile, help had arrived to save the Rangers, but Wilbanks died before the rescue helicopter got him back to base. Wilbanks was awarded the Medal of Honor.

THE VERSATILE HERCULES

IN VIETNAM, the C-130 Hercules proved that there wasn't much it couldn't do. It was a rugged, four-engine turboprop, originally designed as an assault transport. If need be, it could take off and land from airstrips that were short and rough.

From 1965 on, the C-130 was the Air Force's main tactical airlifter in Southeast Asia. It carried cargo on pallets, heavy equipment, passengers, paratroopers, and aeromedical evacuation patients. And that was just the beginning of it.

The Air Force's best gunship was the AC-130, a Hercules fitted out with two 20 mm Gatling guns and two 40 mm Bofors guns whose fire could be



precisely focused on a target while the aircraft flew a pylon turn orbit above. It was deadly against truck convoys on the Ho Chi Minh Trail.

Other C-130s, known as "Blind Bats," worked the Trail, too, finding targets at night and dropping flares to illuminate them for strike aircraft. The Blind Bats worked with an on-scene Airborne Command and Control Center aircraft, which was—what else?—a C-130 operating

in yet another role. In Operation Commando Vault in 1969, C-130s dropped bombs, rolling huge 15,000 pound explosives out the back to clear landing zones for the Army and the Marines. HC-130 Combat Shadows flew aerial refueling missions for rescue helicopters.

The classic image of C-130s in Vietnam is from Khe Sanh, where Air Force airlift sustained the Marine Garrison through a 77-day siege. When landing became difficult because of the hostile fire, the C-130s delivered cargo by LAPES (low-altitude parachute extraction system) drop, with parachutes pulling the cargo out the back door as the airplane made a very low pass above the field.

Many airmen and soldiers may remember the C-130 best for its regular shuttle circuit of the main bases in Southeast Asia. It was the airplane that brought them to their upcountry bases to begin their tours and the one that picked them up a year later when it was time to go home.



PHANTOMS

THE F-4 Phantom was the dominant fighter of the Vietnam War, and easily the most versatile. It was originally developed by the Navy for fleet defense, adopted by the Air Force, and deployed to Southeast Asia in 1965. In the Rolling Thunder campaign in North Vietnam, 1965-1968, Phantoms flew air cover for F-105 strike aircraft and also flew strike missions themselves. For the next four years, a “bombing halt” was in effect over North Vietnam, and the F-4’s job shifted to ground attack in Laos and South Vietnam. After 1972, the F-4s resumed their dual role of air superiority and ground attack.

Early versions of the F-4 had no built-in gun and relied on AIM-7 Sparrow and AIM-9 Sidewinder missiles in combat. Pod-mounted guns were added to C and D model Phantoms in 1967, and the F-4E had an internal 20 mm cannon. All five of the Vietnam War aces—three from the Air Force, two from the Navy—achieved their victories in F-4s. Air Force F-4s shot down a total of 107 MiGs, mostly with missiles. Sparrows accounted for 50 MiGs, and Sidewinders for 33.

The MiGs could defeat F-105 strike missions if they could get the Thuds to jettison

their bombs in order to respond to the MiG attack. The Mig Sweep, Operation Bolo, on Jan. 2, 1967, was designed to discourage this. F-4s from Ubon, flying over the Red River in a manner that resembled F-105s, lured the MiGs to attack and shot down seven of them in a



Photo Daniel Lafferty via Warren Thompson



single day. Taking part were **Col.** (later General) **Daniel “Chappie” James Jr.**, shown above with his F-4, and **Col.** (later Brigadier General) **Robin Olds** (below James).

One of the most famous F-4 missions was Pardo’s Push, March 10, 1967. Badly shot up over North Vietnam, Capt Earl Aman’s aircraft flamed out. Capt Bob Pardo’s F-4 had also taken severe battle damage, but he decided that he could push Aman home. Pardo had Aman drop his tailhook, not a perfect tool for one airplane to push another, but it proved sufficient to get both airplanes back across the border and within reach of rescue.

STRATEGIC AIRLIFT

STRATEGIC airlift in the Vietnam War was provided by the Military Airlift Command, which transported two million tons of materiel and two million passengers between the United States and Southeast Asia. In the early part of the war, strategic airlift was especially important because the harbors and roads in South Vietnam were not yet able to handle the volume of cargo that would eventually come in by sealoift.



Throughout the conflict, strategic airlift was crucial whenever time was important. On several occasions, strategic airlift deployed Army units from bases in the United States to Vietnam.

In 1965, MAC allocated 34 squadrons to strategic airlift for Vietnam. Most of them flew C-124s, aging airlifters known as "Old Shaky," with clamshell doors that opened in the nose so vehicles could be driven on and off. They were augmented by even older airplanes, such as C-97s, from the Air National Guard and the Air Force Reserve. MAC also contracted with commercial airlines for most passenger travel into and out of Southeast Asia. Before additional facilities were built to disperse the arriving flights, Tan Son Nhut in Saigon had



the highest traffic density of any airport in the world.

The main strategic airlifter of the war was the C-141 Starlifter, which made its first delivery to Vietnam in 1965. It was twice as fast as the propeller-driven C-124, and it could carry twice the load. The huge C-5 had even more capacity, but it did not make its first delivery to Vietnam until August 1971 in the later phase of the war.

The C-141 made daily shuttle flights between the United States and Southeast Asia, taking cargo in and bringing out people and casualties. The C-9 joined the aeromedical evacuation mission in Vietnam in 1972. Between 1965 and 1973, MAC airlifters evacuated a total of 406,022 patients from Southeast Asia, 168,832 of them battle casualties.

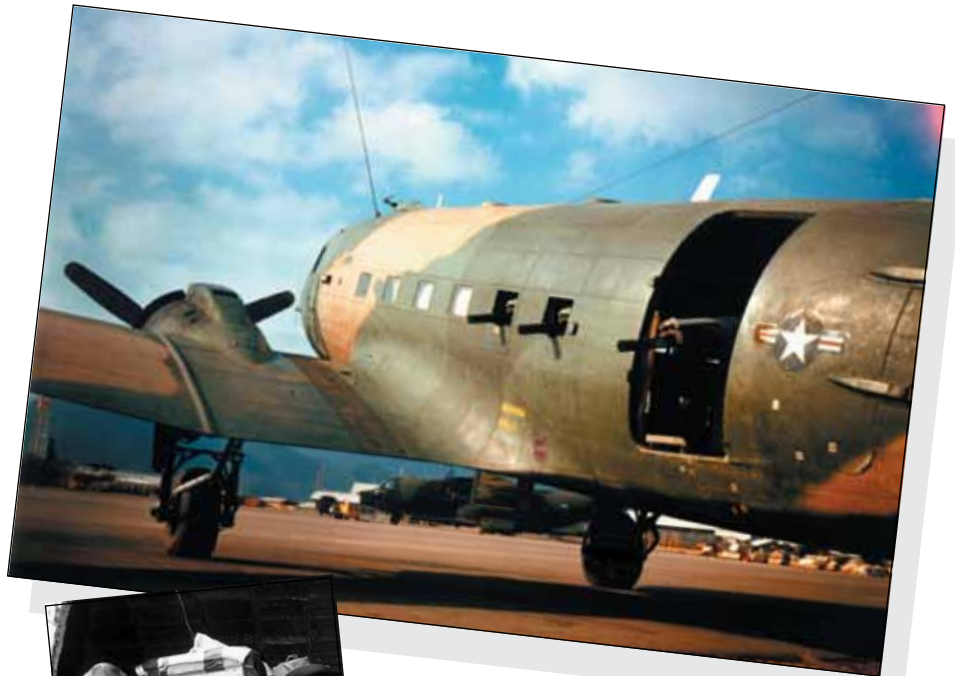
GUNSHIPS

IN VIETNAM, the Air Force fielded a new kind of weapon system—the gunship—by mounting ordnance on converted transport aircraft. It was not simply a matter of shooting out the side of an airplane, though. Gunships flew a precise pylon turn, a circular orbit around a point on which the guns were fixed and fired with devastating effect.

The first gunship was the AC-47, called “Spooky,” “Puff,” and “Dra-gonship.” It had three 7.62 mm miniguns that could pump out 6,000 rounds a minute. It was succeeded by more sophisticated and capable gunships, the AC-119G Shadow, the AC-119K Stinger, and the AC-130 Spectre.

Shadow gunships had four miniguns instead of three. The Stingers added two 20 mm cannon. Shadow flew close air support and air base defense missions. Stinger concentrated on trucks on the Ho Chi Minh Trail.

The AC-130 was the ultimate gunship. Instead of miniguns, Spectre had two 20 mm cannons and two 40 mm Bofors guns. The AC-130 worked at night, enabled by infrared sensors, a low-level TV sensor that could be illuminated by a laser not visible to the naked eye, and a “Black Crow” sensor that detected electronic emissions. Spectre, updated with more firepower and avionics, is still in service today.



On the night of Feb. 24, 1969, **A1C John L. Levitow** was loadmaster on an AC-47 suppressing a mortar attack on Long Binh Army Base near Saigon. A mortar shell exploded on the gunship’s wing and riddled the fuselage with shrapnel. Levitow and another airman who had been dropping magnesium illumination flares from the open cargo door were knocked down, and a live flare fell inside the airplane. It was spewing toxic smoke and was seconds from separating explosively and igniting. Stunned and wounded, Levitow threw himself on the flare, crawled to the door, and tossed it outside, where it exploded. Levitow had more than 40 shrapnel wounds, but he lived and was awarded the Medal of Honor.

AC-47 photo by Bill McDonald via Warren Thompson

AIRMEN IN SOUTHEAST ASIA

A LARGE portion of the force—airmen on the ground as well as aircrews—rotated through Southeast Asia during the Vietnam War years. A small presence of assistance and advisory personnel grew sharply after the Air Force moved into Southeast Asia in force in 1964. The numbers peaked in 1968, with 58,434 Air Force people in South Vietnam and 35,791 in Thailand.

The standard tour was one year, except for aircrews in the Rolling Thunder phase of the war, who rotated back to the states after 100 missions over North Vietnam. Many of them volunteered for another tour in Southeast Asia.

There were 12 principal US air bases in South Vietnam, seven in Thailand. The larger ones housed the same functions as a base back home, plus a few that were unique to the war zone. The support force included security policemen patrolling the perimeter with sentry dogs, bomb loaders, RED HORSE engineers, intelligence analysts, aerial port managers, mechanics, communications specialists, supply troops, and administrative and personnel people. Medical care ranged from a 200-bed military hospital at Cam Ranh Bay to small dispensaries in remote locations, operating out of prefabricated structures.



There were a few civil servants and contractor tech reps in theater, as well as numerous Air Force Reservists and Air National Guardsmen. The Air National Guard, for example, flew 30,000 sorties in Vietnam, amassing 50,000 combat hours. The Southeast Asia team also drew on people and assets based in such locations as Guam, Taiwan, Okinawa, and the Philippines.

Total Air Force casualties in the Vietnam War included 2,589 killed and 568 missing in action and prisoners of war. Of the missing and POWs, 368 were eventually returned.

TANKERS



ONE of the big operational changes in the Vietnam War was the everyday aerial refueling of combat aircraft. Fighters on their way into North Vietnam topped up their tanks from KC-135 tankers, flying orbits above Thailand, Laos, and the Gulf of Tonkin, then met the tankers again on the way out to get enough fuel to make it home. This more than doubled the range of the combat aircraft, which could be based a considerable distance from the strike zone.

In those days, all of the tankers belonged to Strategic Air Command, and their primary mission was to support SAC in its nuclear role. The additional requirement in Southeast Asia was a stretch of limited resources. The burden fell on the tanker aircrews, who pulled frequent temporary deployments to Southeast Asia and an extra workload when they returned home. Demand for refueling peaked in 1972, when 172 tankers were assigned to the Vietnam War.

The tankers served a diversity of customers. Among them were SAC B-52 bombers, flying 12-hour missions from Guam, and other aircraft, such as the SR-71 Blackbird, which required a unique kind of fuel.

The tankers who gassed up the fighters were known as “Young Tigers.” They refueled tactical aircraft flying to the Red River delta, hundreds of miles from their bases in Thailand. Without refueling, the missions would not have been possible. Even so, the fighters could only spend 20 minutes or so in the target area—less if they used afterburner—before heading back to the tanker. Oftentimes, they cut it close.

How many such “saves” took place is not known. The Young Tigers were noted for violating the rules and crossing “the fence” into North Vietnam to gas up a fighter running on fumes. That couldn’t be reported, but the tanker crews knew, and so did the pilots who would not have made it back otherwise.



HEAVY BOMBERS

THE heavy hitter in the Air Force lineup was the B-52. It was in action from 1965 on, but political constraints from Washington kept it from being used with full effect against key targets in North Vietnam until 1972.

Seventh Air Force in Saigon did not control the B-52s. They were owned by Strategic Air Command, which retained control. Bombers based on Guam flew the initial “Arc Light” missions in South Vietnam. The Air Force wanted the B-52s to be part of Operation Rolling Thunder in North Vietnam, but was overruled by the White House because of concern about “widening” the war. B-52s began operating from U-Tapao in Thailand in 1967, and from Kadena Air Base, Okinawa, in 1968.

The B-52 was an awesome weapon, working against targets in South Vietnam, the Ho Chi Minh Trail, and around the Demilitarized Zone. It was particularly effective at Khe Sanh in 1968, where it destroyed tons of North Vietnamese supplies and helped break the siege of the Marine outpost there.



Several models of B-52s saw service in Vietnam. Notable among them was the B-52D, modified to carry a total of 108 500-pound bombs—84 internally and 24 on pylons under the wings.



The biggest mission of the war for the B-52s was Operation Linebacker II, Dec. 18-29, 1972, when they were unleashed on North Vietnam. They flew 724 sorties, smashed the defenses of Hanoi and Haiphong, and brought North Vietnam to peace negotiations.

Not all of the MiGs were shot down by fighter pilots. On Dec. 18, 1972, during Operation Linebacker II, SSgt. Samuel O. Turner, tail gunner on a B-52D, downed a MiG-21 near Hanoi with .50 caliber machine gun fire. Six days later, A1C Albert E. Moore, also a B-52 gunner, shot down another MiG-21 after a strike on the Thai Nguyen rail yard.



THOUSANDS of Americans were missing in action in the Vietnam War. Of these, a total of 771 were known to have been captured by the enemy. Most of them were Air Force and Navy airmen, shot down over North Vietnam and held in the “Hanoi Hilton” and other prisons, where they were tortured and routinely mistreated.

The POWs and MIAs got little public attention in the United States, though, until October 1969, when the cover story in the Air Force Association’s *Air Force Magazine*, “The Forgotten Americans of the Vietnam War,” ignited national concern. The article was reprinted in condensed form by *Reader’s Digest* and inserted in the Congressional Record six different times.

Some of the POWs were released before the end of the war. Another 113 of them died in captivity. Eventually 658 of the 771 would be returned to the United States.

In Operation Homecoming, which began Feb 12, 1973, Air Force airlifters brought 591 POWs out of North Vietnam. The majority of those released—325 of them—were Air Force members, and 138 were Navy. The ex-POWs were processed through Clark Air Base in the Philippines and taken to



military hospitals in the United States, from where they were quickly reunited with their families.

POWs have always been held in special regard by the Air Force Association, and those missing in action and not accounted for are not forgotten.

Badly injured after his Misty FAC F-100F was shot down over North Vietnam Aug. 26, 1967, **Maj. George E. “Bud” Day** was captured and tortured. He managed to escape, and reach the Demilitarized Zone. He tried to signal US aircraft, but was ambushed, recaptured, and imprisoned in Hanoi, where he continued to offer maximum resistance to his captors until released in 1973. He was awarded the Medal of Honor.

On a flight over Laos Nov. 9, 1967, **Capt. Lance P. Sijan** ejected from his disabled F-4C. Although severely injured, he successfully evaded capture for more than six weeks. Caught, he managed to escape again, but was recaptured and tortured. While a POW, he contracted pneumonia and died. He was awarded the Medal of Honor.



The Author

John T. Correll, was editor in chief of the Air Force Association's monthly journal, *Air Force Magazine*, for 18 years. In that capacity, he wrote "War Stories at Air and Space—the 1994 article that first brought the Smithsonian's plans for the *Enola Gay* to public attention—as well as subsequent reports that figured prominently in the nationwide controversy that ensued.

