



U.S. AIR FORCE

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SPY WARIES

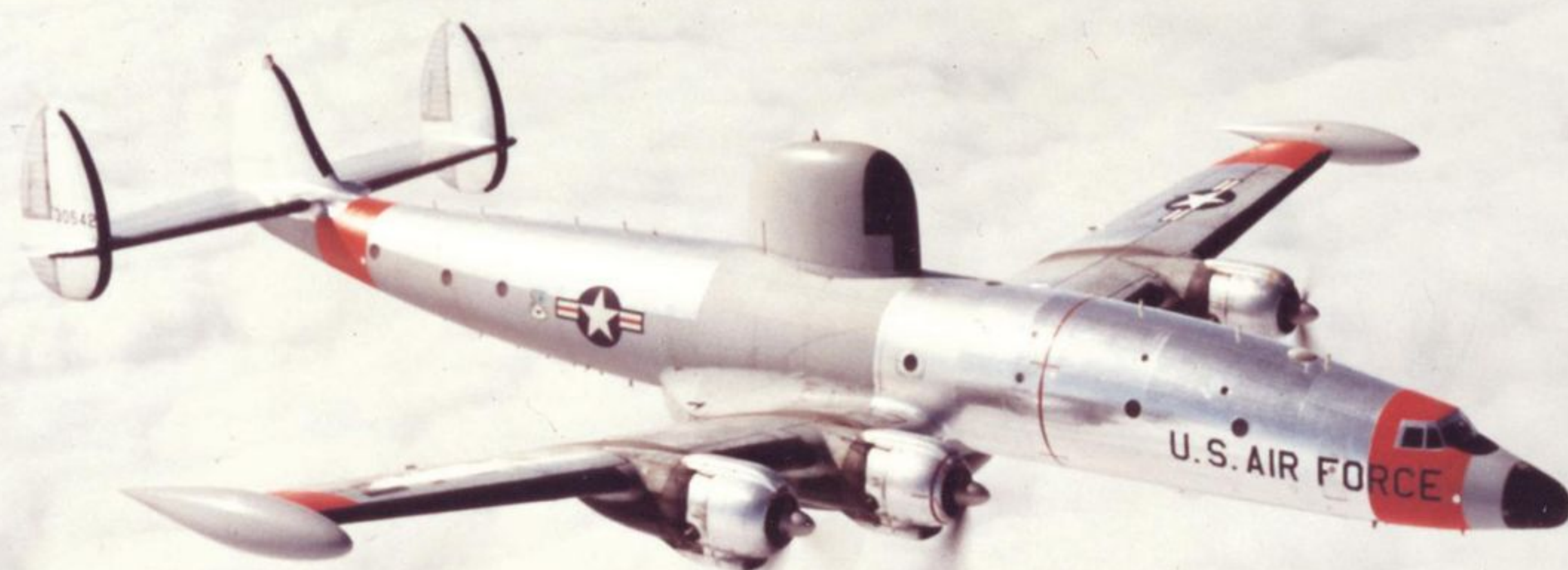
Sophisticated high-tech devices enabled U.S. forces to keep tabs on the enemy, whose own low-tech approaches proved effective

By Jon Guttman

High and mighty, the single-seat Lockheed A-12 and the two-seat SR-71 Blackbird conducted photographic overflights in North Vietnam at a speed of Mach 3.2 and altitude of 82,000 feet. The closest any enemy ever came to bagging a Blackbird occurred on Oct. 30, 1967, when a piece of shrapnel hit one wing after the detonation of three North Vietnamese surface-to-air missiles. The SR-71A shown here operated from Kadena Air Base in Okinawa, where the local venomous snakes inspired its tail marking.



he Vietnam War saw a unique combination of guerrilla and conventional warfare, both of which depended on timely intelligence for success. The United States used sophisticated and constantly evolving electronics to intercept radio communications and spot enemy positions. While North Vietnam protected its skies from American fighter jets and bombers by deploying Soviet-supplied radar, weapons and equipment, Americans pushed the envelope with airborne radar aboard specially modified aircraft. On land, America's AN/TPS-25 ground surveillance radar and AN/MPQ-4 counterbattery radar detected troop movements and artillery. In a \$1.5 billion program to stem the flow of reinforcements and materiel from the North, the U.S. started—but never finished—a barrier of old-fashioned barbed wire and mines, plus electronic sensors, near the Demilitarized Zone. It was called McNamara's Line, after Secretary of Defense Robert McNamara. Electronic sensors and odor-detection methods to identify human targets were only partially successful. For example, the Viet Cong foiled devices that detected the ammonia in sweat by hanging urine bags from trees so the Americans would bomb those areas while they conducted their business elsewhere. Both sides also had traditional human spies and intelligence collectors, but the Viet Cong had the advantage of spies who could easily blend in with people friendly to Americans.



An advanced aerial informer, a Lockheed EC-121D Warning Star in the Air Defense Command's 552nd Airborne Early Warning and Control Wing patrols the Pacific Ocean in 1967. To counter North Vietnam's initial advantage in ground-controlled radar systems that guided its fighters trying to intercept U.S. aircraft, this militarized version of the L-1049 Super Constellation airliner operated from Taiwan to provide intercept guidance to American aircraft. The first airborne-controlled interception occurred on July 10, 1967, when an EC-121D directed McDonnell F-4C Phantom II fighters to shoot down two North Vietnamese MiG-17s.

Inside an EC-121H, a navigator and a navigator technician go over the flight plan at the start of their 12-hour mission. Packed with constantly improving radar and other electronics, Warning Stars gathered and transmitted all types of intelligence to American forces on the ground and in the air—a precursor to subsequent generations of AWACS (airborne early warning and control system) aircraft.



U.S. AIR FORCE (ALL)

A spy from on high, a Lockheed U-2 taxis past South Vietnamese Douglas A-1 Skyraiders at Bien Hoa Air Base near Saigon in early 1965. Even though one U-2 was downed over the Soviet Union in 1960 and another over Cuba in 1962, the aircraft—capable of climbing more than 70,000 feet—was successful in its photoreconnaissance missions from bases in Vietnam and Thailand. The U-2R, introduced in 1967, was about 30 percent larger and had external fuel pods for an extended range.



Sporting an attitude, the Teledyne-Ryan BQM-34B Firebee drone was usually launched from a Lockheed DC-130 transport aircraft and followed a programmed flight plan to conduct surveillance missions, drop leaflets or find North Vietnamese missile sites. Afterward, the drone released a parachute and as it descended was snatched in midair by a recovery helicopter. More than 1,000 Firebees flew more than 34,000 sorties during the war. Speeding at 690 mph and flying as high as 60,000 feet, it was an elusive target. North Vietnamese MiG pilots counted any they shot down as legitimate air-to-air kills. *Tom Cat*, shown here, carried out a remarkable 68 missions in its career.

A Mach 1 multitasker, the McDonnell RF-101C Voodoo was designed as an interceptor aircraft but also served in photoreconnaissance and bombing roles. An RF-101 undergoing maintenance at Tan Son Nhut Air Base near Saigon in 1965 reveals one of its six obliquely-mounted cameras. Bombing attacks were usually followed by photo missions so that commanders could do bomb-damage assessments—likely making an encore appearance over already-aroused enemy air defenses. The Voodoo's best course was to go in fast and low. In 35,000 sorties, 39 Voodoos were lost; 33 of them combat-related, including five destroyed by surface-to-air missiles but only one shot down by an enemy MiG-21.

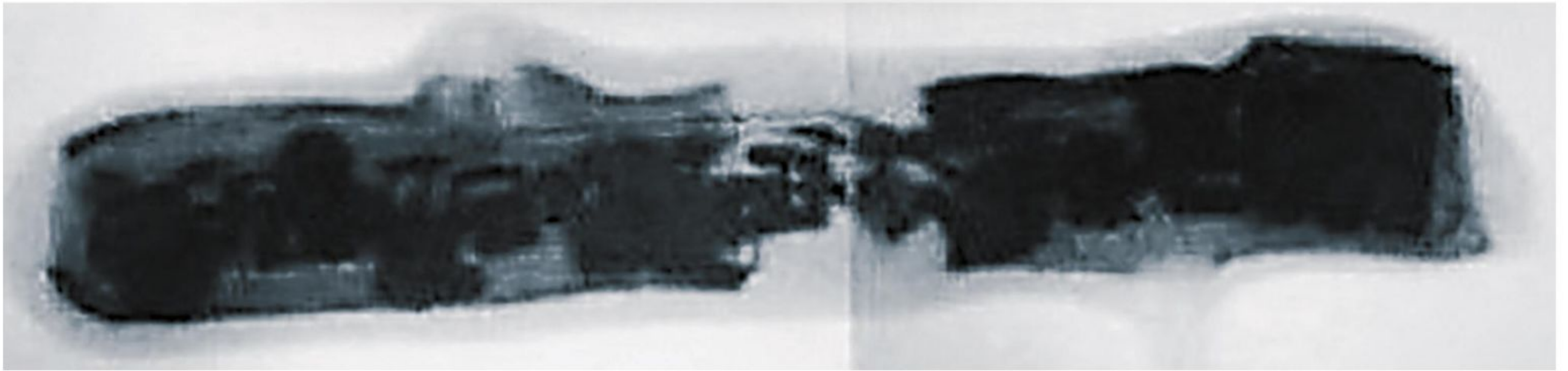


Counterbattery

radar was commonly employed at firebases. One typical example was the AN/MPQ-4A, which emitted two radio beams. If an enemy projectile broke the beams within a 6-mile distance, it would appear on a scope and then a computer would determine the approximate coordinates of the shot's origin. This AN/MPQ-4A was at the Song Be base in the Central Highlands in January 1968.



TOP: U.S. AIR FORCE; BOTTOM: U.S. ARMY; OPPOSITE, TOP: U.S. AIR FORCE (BOTH); OPPOSITE, MIDDLE AND RIGHT: NATIONAL ARCHIVES



Appearances can be deceiving, as what looks like the dirt-covered dropping of an indigenous dog-sized animal is actually revealed in an X-ray to have a nonorganic, mechanical interior and radio transmitter. Dropped in the vicinity of a downed airman, this T-1151 transmitter served as a homing beacon that broadcast signals to aircraft searching for the American in need of rescue from the “bush.”



During Operation Igloo White, 1968 to 1973, camouflaged electronic sensors, like this artificial vegetation, were dropped along the Ho Chi Minh Trail. They detected and transmitted enemy movements to aircraft that relayed the information to air bases in Thailand. Subsequent airstrikes on North Vietnamese Army infiltration routes inflicted heavy casualties, but the operation failed to prevent major NVA offensives in 1971 and 1972.

Human intelligence is an ages-old but never-obsolete art, and this proved true in Vietnam. Planting spies in virtually every venue, the communists cast a wide net of operatives and agents who gathered human intelligence. In 1965, Pham Xuan An obtained a press card and worked as a journalist for *Time* magazine in Saigon. . At his home in Ho Chi Minh City on April 26, 2000, An revealed that he had lived a second life during the war as a Viet Cong spy.



Intelligence personnel often accompanied units conducting offensive operations into communist territory. When the 11th Armored Cavalry Regiment found and raided a Viet Cong bunker complex about 3 miles from the South Vietnamese border—in hitherto off-limits Cambodia—on May 3, 1970, the troops recovered a trove of documents, turned over to the “intel guys” for meticulous examination. One never knew what one would find, and Americans welcomed anything that might provide clues for outwitting an already-elusive and resourceful enemy.