

# **The U-2 Spyplane: Toward the Unknown, A New History of the Early Years**

## ***Intelligence in Recent Public Literature***

By Christopher Pocock. Atglen, PA: Schiffer Military History, 2000. 288 pages.

**Reviewed by Dr. Gerald K. Haines**

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Chris Pocock has done his homework well. His most recent book — *The U-2 Spyplane, Toward the Unknown, A New History of the Early Years* — is the most comprehensive examination to date of the design, production, and deployment of the U-2 reconnaissance aircraft. Drawing on freshly declassified materials and a wealth of interviews, Pocock traces the development of the high altitude spyplane from the early 1950s, a time of heightened concern over major gaps in US intelligence on the Soviet Union, to the shootdown of Francis Gary Powers and the Cold War tensions in the 1960s.

The story of "Angel"—as Kelly Johnson, the brilliant Lockheed aeronautical engineer, called the U-2—is a fascinating tale of success, and Pocock knows his subject. He provides wonderful technical details on the plane's capabilities. The U-2 could fly at 70,000 feet, had a range of 3,500 nautical miles, and could stay in the air for 8 1/2 hours. The early J57 engine was the first jet engine with 10,000-lbs. of thrust; at 70,000 feet, only 7 percent of the engine's sea level thrust could be reproduced. In flight, there was

less than a ten knot difference between a speed so fast that it would rip the wings off the aircraft and a speed so slow that it would stall the engine. Every plane, according to Pocock, was carefully crafted and had its own identity. Since each plane was different, repair parts had to be specially marked. The U-2 could "manufacture" fuel: its kerosene fuel mixture was "cold-soaked" in the wing tanks, and when the fuel heated and expanded as it passed through the fuel-oil exchanger, it actually produced 20 to 30 more gallons of useable fuel. Without a fuel gage, U-2 pilots were often astonished to find that they had more fuel left than what they had carefully calculated.

Pocock does not neglect the historical setting for the development of the U-2, nor the political infighting that accompanied it. He carefully lays out the role that civilian scientists—such as James Killian, "Din" Land, and James Baker—played in advocating the development of the spyplane and the revolutionary use of scientific techniques in intelligence collection. In addition, he portrays in a balanced manner the long struggle for control of the program between the Air Force and the CIA. Although the Air Force initially opposed development of the U-2, it soon ordered a number of the planes after the CIA version demonstrated its value. Despite the Air Force's continued efforts to take over the program during the early years, its U-2s were relegated to taking nuclear fallout samplings in the upper atmosphere—not making overflights of the Soviet Union. Pocock also illustrates how U-2 imagery played a major role in resolving the "bomber gap" debate. The first U-2 flights over the Soviet Union strongly suggested that there was no massive buildup of Soviet long-range bombers. The U-2 Spyplane: Toward the Unknown also addresses the question of whether the Soviets were mass-producing their long-range Bison bomber, a bone of contention between the Air Force and the CIA.

Pocock illustrates the huge impact that the U-2 imagery had on intelligence analysis, as Arthur Lundahl and his small shop of photo interpreters—the pioneers in what would become the National Photographic Interpretation Center—struggled to make sense of the rich new data. Even here, Pocock shows the bureaucratic squabbling as the Air Force insisted on retaining an independent photo interpretation group in the Pentagon.

Perhaps the best part of The U-2 Spyplane: Toward the Unknown is the author's treatment of the long controversial Soviet shootdown of the U-2 piloted by Francis Gary Powers on May Day 1960. Using newly available Soviet material and interviews as well as US records, Pocock carefully lays

out the events of that fateful day. He begins with the long delays in the approval process before the flight could take off from Pakistan. He traces the early Soviet radar detection of the intruder and the frantic attempts to shoot it down. According to Pocock's account, the Soviets launched several MiG interceptors and several SAM missiles at the US spyplane. The first missile exploded some way behind the aircraft, disabling it. As the U-2 spun out of control and descended to about 34,000 feet, Powers bailed out. With his faceplate frozen over, however, he was unable to pull the destruction switches. The Russians, meanwhile, unsure whether the dissolving image on their radar screens signified a kill or the deployment of electronic countermeasures against their radar, continued to fire missiles at the target. In the confusion, one of the missiles destroyed a MiG-19 interceptor.

Pocock's authoritative account dramatically contradicts the stories that surfaced after the incident that Powers' plane had descended gradually from its maximum altitude and was then shot down by a Russian fighter. Pocock shows from Soviet records that the flight had been detected and tracked from its earliest stage and that the Soviets had a high altitude SAM that worked. He further points out that despite Soviet attempts to copy the U-2, they never matched its capabilities. Their YAK and M-17 were both twin-engine aircraft with nowhere near the capabilities of the U-2, which is still flying today.

No review would be complete without a few quibbles. The Steuart Motor Car Company building in which Lundahl's group worked was not in the suburbs of Washington but actually on K Street, NW. And I was disappointed to find no separate bibliography—one has to go to the individual footnotes for the sources.

That being said, Chris Pocock deserves great credit for his new book. *The U-2 Spyplane: Toward the Unknown* is a comprehensive, detail-packed look at early US manned-reconnaissance efforts. With no access to classified material, he nevertheless has produced a first-rate volume that is chock-full of facts and information. Pocock has been diligent in his research and is today's foremost authority on the U-2 and its development.

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