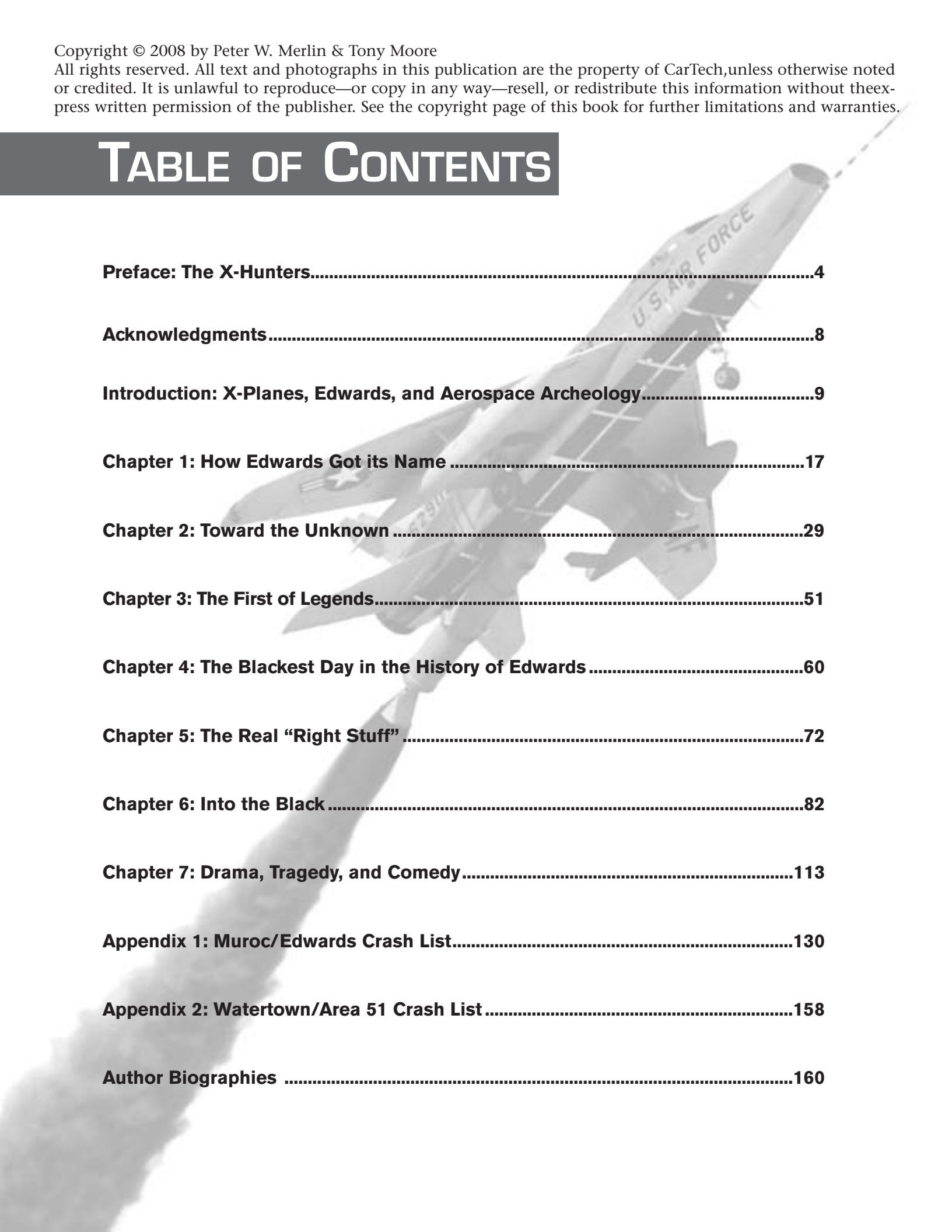


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CHAPTER 3



Tony LeVier, posing with a production P-80A at Lockheed's Burbank Airport facility, was promoted to chief test pilot following the tragic loss of Milo Burcham in a crash. LeVier himself narrowly avoided losing his life in the XP-80A when its engine disintegrated.
(AFFTC History Office)

THE FIRST OF LEGENDS

Although Germany and Great Britain entered the World War II with jet aircraft programs well underway, the United States was slow to embrace the new technology. The Army Air Forces issued a contract to Bell Aircraft Company in 1941 for development of a jet fighter, two years after the first flight of Germany's Heinkel He 178.

The Bell XP-59A Airacomet showed little improvement over the performance of contemporary propeller-driven aircraft, and so it never saw combat. Produced in small numbers, the P-59 mainly served to familiarize pilots with the basic performance and handling characteristics of jet aircraft.

Meanwhile, Germany and Britain fielded operational jet-powered combat aircraft. Consequently, AAF officials sought development of a more capable jet that might be placed into service. This effort resulted in a contract with Lockheed Aircraft Corporation for development of a prototype fighter, designated XP-80. The company promised to deliver the airplane in just 180 days.

Clarence L. "Kelly" Johnson, Lockheed's most capable engineer, assembled a team to design and build the airplane in utmost secrecy. For security reasons, the group worked in a walled off production area at Lockheed's Burbank, California, plant. The clandestine facility was soon nicknamed the "Skunk Works" (later changed to Skunk Works) after the backwoods still where a character in Al Capp's *Lil' Abner* comic strip brewed moonshine using old boots and dead skunks. Johnson's team delivered the XP-80 (Lockheed Model L-140) in 143 days, thus beginning a tradition of rapid prototyping by Lockheed's Advanced Development Projects division. The "Skunk Works" name eventually became synonymous with "quick, quiet, and on-time" production of advanced aircraft.

Ground testing of the XP-80 began in late 1943 at the remote Muroc Flight Test Base on the north end of Rogers Dry Lake. Unfortunately, both engine inlet ducts collapsed during final preflight checks. Following repairs and modifications, the airplane finally flew on 8 January 1944, with Lockheed chief



Lockheed chief test pilot Milo Burcham prepares to make the first flight in the XP-80 at the north end of Rogers Lake in 1943. Powered by a British Goblin engine, the jet achieved a speed of 547 mph in level flight. (AFFTC History Office)



The first of two XP-80A preproduction prototypes, seen here over Muroc Flight Test Base, was known as the "Gray Ghost." It served as a testbed for a new engine and intake duct design improvements. (AFFTC History Office)



During a flight in the XP-80A to investigate engine intake-duct rumble, one of the jet's turbine wheels disintegrated, resulting in loss of the airplane. Tony LeVier bailed out at low altitude and survived with back injuries. (AFFTC History Office)

test pilot Milo Burcham at the controls. Burcham coaxed the jet to a speed of 547 mph in level flight, testing the performance of its British Goblin engine.

Production models of the airplane were to be powered by a larger, more powerful engine built by General Electric. While Lockheed designers enlarged the airframe to accommodate the new GE I-40 powerplant, they made other improvements (such as a pressurized cockpit) to address shortcomings and problems uncovered while testing the XP-80. Two prototypes of the new version, designated XP-80A (Lockheed Model L-141), were the first of a long family of P-80 production variants that flew under the name Shooting Star.

The first service-test models of the Shooting Star began rolling off the assembly line in the summer of 1944. The AAF sent two each to England and Italy to combat Germany's Messerschmitt Me 262, but not enough of the jets, or crews trained to fly them, were available to equip a front-line squadron. Accelerated service testing in the United States led to several fatal accidents, claiming the lives of such men as Lockheed's Milo Burcham and America's top ace and Medal of Honor winner, Maj. Richard I. Bong.

After the war, however, the Shooting Star became a reliable front-line fighter. More than 1,700 of these jets saw service with the Air Force and Navy, as well as the air forces of Brazil, Chile, Colombia, Ecuador, Peru, Uruguay, and Yugoslavia. A two-seat trainer variant saw service in more than 20 countries, with some continuing to fly into the 21st century. A highlight of the airplane's service record occurred on 8 November 1950, when Lt. Russ Brown, flying an F-80C of the 16th Fighter Interceptor Squadron, shot down a North Korean MiG-15 in the first all-jet air-to-air combat.

Gray Ghost

The first of two XP-80A pre-production prototypes was virtually complete by 3 June 1944. It was painted light gray, earning it the nickname of "Gray Ghost." The airplane was trucked from Burbank to the Muroc Flight Test Base early on the morning of 4 June. For security reasons it was completely covered by a tarp and accompanied by a police escort. It was soon joined by the second XP-80A, left unpainted for comparison of aerodynamic drag characteristics and dubbed the "Silver Ghost." The prototypes primarily served as testbeds for the new engine and improvements of the intake duct design.

At Muroc, Lockheed technicians completed final assembly and checks of the Gray Ghost in preparation for taxi tests on the dry lakebed. Lockheed chief test pilot Tony LeVier (newly promoted following the loss of Burcham) was assigned as project pilot. On a few high-speed taxi runs the airplane hopped a foot or two off the ground, but not high enough to be considered a true flight.

The Gray Ghost took to the air for the first time on 10 June 1944. Once airborne, LeVier realized the aircraft was unstable in pitch as he struggled to climb to an altitude of 10,000 feet. To complicate matters, hot air (325 degrees F) was blowing into the cockpit due to a faulty pressurization valve. Despite these problems, LeVier successfully completed a series of tests, but his problems weren't over.



In 1996, the X-Hunters searched for the XP-80A crash site in desert terrain on the western edge of Edwards Air Force Base. Much of the burned aluminum debris had been further corroded by the alkaline soil. (Lance Thompson)

As he lowered the flaps, the aircraft rolled inverted because one flap had jammed. After regaining control, LeVier decided to return to base with an asymmetrical flap configuration. Thirty-five minutes after lifting off from the runway at Muroc FTB, he landed on the lakebed with only one flap down.

Technicians spent several days inspecting the airplane and making corrections. Following adjustments to the engine and placement of ballast to move the center of gravity, LeVier accomplished a second test flight with almost no problems. Hot air was still blowing into the cockpit, but changes to a faulty control valve soon solved the problem.

In late 1944, several Army pilots visited Muroc to fly the Gray Ghost and the original XP-80 in mock combat against such front-line fighters as the P-38, P-47, and P-51, and various bombers. These secret tests were designed to determine what tactical formations, if any, could be used against the German jets then being seen in combat over Europe. Pilots found that the jets bested propeller-driven planes every time. The results of the exercise made production of American jet fighters all the more urgent to counter the German threat.

As testing of the XP-80A continued, LeVier discovered a phenomenon that came to be known as "duct rumble." The cause was eventually traced to uneven airflow at high speeds and low engine revolutions per minute that created turbulent flow inside the intake ducts at the fuselage wall. Lockheed engineers had to develop a bypass to bleed the troublesome air above and below the wing.



More than 50 years after the crash of the "Gray Ghost," the X-Hunters interview Tony LeVier about his harrowing escape. The meeting took place at Burbank Airport, within a mile of the spot where the XP-80A was built. (Lance Thompson)