There is, perhaps, in every thing of any consequence, a secret history which it would be amusing to know, could we have it authentically communicated.

—James Boswell, *The Life of Samuel Johnson, LL.D.*
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Late in the afternoon of Wednesday, July 12, 2000, a bus carrying about a dozen “high political rollers,” as thirty-six-year-old Air Force Captain Scott Swanson viewed them, pulled up at Indian Springs Air Force Auxiliary Field, a broiling desert outpost northwest of Las Vegas. The visitors included the National Security Council’s deputy counterterrorism chief, a senior official from the CIA’s Counterterrorist Center, officials from other intelligence and military agencies, and the director of a shadowy Air Force technology shop known as Big Safari. Indian Springs was home to the 11th and 15th Reconnaissance Squadrons, units assigned to fly a relatively new unmanned, remote-control aircraft. Though the drone was equipped with nothing deadlier than daylight and infrared video cameras, it bore a menacing name: Predator.

Swanson, a former special operations helicopter pilot, had flown Predators for the past two years, mostly in regular intelligence, surveillance, and reconnaissance missions over the Balkans. But soon he was to join Big Safari as that outfit’s sole Predator pilot, which was why he had received a phone call from the Pentagon a few days earlier asking him to organize a show-and-tell session for those on the bus.

“There’s going to be a bunch of people in suits,” Swanson was told. “Can you do a briefing on Predator and show them some capabilities in flight, but keep it quiet?”
On the other end of the call was Air Force Colonel James G. Clark, whose official title was technical director, simulation and integration, Office of the Assistant Vice Chief of Staff, Headquarters, U.S. Air Force. In reality, Clark worked for the service’s two top leaders, the four-star chief of staff and the civilian secretary of the Air Force. He was their favorite fixer, an inside operator who was canny about how to bypass bureaucracy and who relished getting things done, as he liked to put it, “quick and dirty.” This was partly why Clark encouraged everyone to call him by his nickname, Snake—or, if regulations required they salute him, Colonel Snake. He consciously cultivated the image of a shrewd and slippery operator who might be dangerous if stepped on, a reputation he found useful in intimidating real or potential opponents. For the past three years, the Predator had been Snake Clark’s pet project, and for the past two years, Big Safari’s as well.

On the phone, Clark told Swanson the suits were coming to Indian Springs to get a better understanding of what they might expect from the Predator if it were used “in a rugged part of the world.” Clark slithered around the obvious question of what precise mission the government had in mind, but Swanson got the message. He read daily intelligence briefs and worked with intelligence officers, and he could guess which rugged part of the world, and even which country, was of such keen interest to these particular visitors.

From their air-conditioned bus, the delegation climbed down into the shimmering desert heat at Indian Springs and filtered into an air-conditioned briefing room, where Swanson gave them a PowerPoint presentation on the Predator and what it could do. Introduced six years earlier under a new type of rapid Pentagon procurement program, the Predator was the military’s first Medium Altitude Endurance Unmanned Aerial Vehicle—a drone that could linger in the air well beyond twenty-four hours, pointing cameras at the earth and transmitting live video images back to its operators. The little aircraft owed its phenomenal endurance to its unique configuration, a design informed by its inventor’s childhood hobby. The Predator had thin, tapered wings stretching forty-nine feet from tip to tip and a slender fuselage just under half that long, eight feet shorter than a Piper Cub’s. Fashioned from lightweight com-
posite materials, the fuselage was flat on the bottom, rounded on top, and bulged into a dome at the nose. With its flimsy wings and skin, the craft resembled a weekend hobbyist’s glider and couldn’t fly much faster. Powered by a four-cylinder engine akin to those used on snowmobiles, the small propeller on the plane’s tail could push it through the air at a sluggish top speed of just over eighty miles an hour.

Another reason the Predator could stay airborne for so long was that there was no pilot inside. Instead of a cockpit, the dome at the aircraft’s nose housed a satellite dish; its two-member flight crew remained on the ground. Seated before an array of computers and color video screens in a metal box resembling a freight container, they flew the drone by remote control, using a satellite data link. As they did, one of the two crew members, designated the sensor operator, aimed and manipulated a turret under the Predator’s chin that held two video cameras—one to shoot color images in daylight, the other able to produce infrared images by detecting variations in temperature, whether by day or by night.

As Swanson briefed them on the basics, his visitors interrupted with questions. Some wanted to know specifics about the Predator’s speed, range, and endurance. Some wanted to know if the video from the Predator’s cameras was sharp enough to identify an individual, and from what altitudes. Some wanted to know whether people on the ground could see the Predator or hear its engine. The visitors also wanted to know what tactics he would use to find a specific person and how hard that might be to do.

Swanson’s responses almost all began with “It depends.” But in order to better answer some of their questions, he invited his guests to follow him back out into the heat and down the Indian Springs flight line, where they could examine one of the faux freight containers the Air Force used to fly its small fleet of Predators.

To tour the twenty-four-foot-long, eight-foot-wide, eight-foot-tall ground control station, known to insiders as a GCS, the members of the party had to take turns, entering two at a time. Before taking anyone inside, Swanson suggested that while his visitors waited, they might try to spot or hear a Predator; one was orbiting a mile or two from the airfield, he assured them, launched a bit earlier by a crew inside the GCS.
The sky was clear and it was quiet around the desert airfield, but no one would detect the drone.

Two by two, Swanson’s guests entered the GCS through one of two large, meat-locker-style doors on one side of the container that were opened by swinging a big lever handle. It was chilly inside the dark compartment, where constant air-conditioning was necessary to keep the electronic equipment from overheating. Even in the desert, some of the Air Force people working in the GCS wore jackets.

To their right as the visitors entered was the Predator’s equivalent of a cockpit, a pair of identical consoles flush against the front wall, each faced by a brown, mock-leather chair for the flight crew that looked more comfortable than it was. In front of each chair was a keyboard; on a metal rack above the keyboard at each console were two nine-inch screens side by side that displayed data about the aircraft. Above the nine-inch screens were two nineteen-inch monitors for each console, one stacked above the other. The lower monitor normally displayed imagery, the upper one a moving map, although what they showed could be changed.

Each console also featured controls much like those of a normal airplane—or a video game. To the right of the keyboard at each console was a joystick with several buttons on it. To the keyboard’s left was a lever that moved forward and back. The joystick on the left console normally governed the Predator’s control surfaces; that console’s lever was the aircraft’s throttle. The joystick and lever on the right console normally served as the controls for the Predator’s cameras—the stick was used to aim them, the lever to zoom their view in or out. Below the two consoles were pedals that moved the drone’s inverted-V tail like a rudder to help change the Predator’s direction in flight. When the drone was on the ground, the pedals worked as brakes.

Either console could be used to fly the Predator, but only one controlled the drone’s flight at any given time. Normally that was the left console, and the Predator’s pilot would sit in the left-hand chair; the right console was usually used to control the cameras, and the drone’s sensor operator would sit in the right-hand chair. But with the push of a red button, the functions of the two consoles could be switched so that two
pilots could sit at the flight consoles, the second officer serving as copilot to assist during takeoff or landing.

Behind the flight crew were work stations holding computers, other electronic gear, and telephones used by intelligence analysts who typically worked in the GCS. Along the walls—which were covered with thin synthetic paneling of the sort often seen in mobile homes—were fold-down vinyl seats similar to the canvas ones in military transport planes, but without seat belts or shoulder harnesses. Toward the back of the container was a second meat-locker-type door, which, like the first, had to be opened and closed gently to avoid making noise that might distract those working inside.

As each pair of guests stood behind the flight console chairs watching the Predator’s video, the crew showed them the view through the color TV camera, useful only in daylight, then switched to the black-and-white infrared camera’s view. The sensor operator also toggled the infrared sensor between its two modes, “white hot” and “black hot,” in which warmer objects looked either white or black in contrast to cooler objects. The crew focused and zoomed in on vehicles driving around the airfield, on individuals walking from place to place—and then on the visitors standing just outside the door, waiting to enter the GCS. Swanson got the feeling the delegation was impressed; there were hushed conversations, whispers back and forth, and a lot of notes taken.

Not long after the guests left, Swanson learned that his guess about their reaction to the demonstration must have been correct, as was his hunch about the mission they had in mind. The Predator was going to play hide-and-seek in Afghanistan with one of the world’s most wanted men: the elusive leader of the Islamic fundamentalist terrorist group Al Qaeda, Osama bin Laden. And when it did, Scott Swanson would be the chief pilot.

Life with Big Safari was getting interesting in a hurry.

This is the story of the first armed drone ever to be flown by intercontinental remote control and used to kill human beings on the other side of
the globe. The military has long had an interest in unmanned aircraft, but before the Predator, drones were at best a niche technology. The Predator itself was widely ignored at first, until a series of iconoclastic visionaries began transforming it from a simple eye in the sky into an exotic new weapon. Once the Predator became capable of firing laser-guided missiles at enemies half a world away, military and industry attitudes toward such unmanned aerial vehicles changed nearly overnight. The drone revolution began.

How and why that happened is a tale previously told only in dribs and drabs, and often inaccurately. This account is based on five years of reporting and hundreds of interviews with the insiders who made the Predator what it became—an invention that not only changed the military, the CIA, and warfare itself, but also led the way into a new technological age. Drones of all kinds are now poised to transform civilian aviation, law enforcement, agriculture, and dozens of other human endeavors.

This is the drone revolution’s book of genesis, and like another creation story it opens near the confluence of the rivers Tigris and Euphrates. It begins with a boy in Baghdad.

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