

the object he was pursuing. The Gorman sighting may be the most overrated UFO report in the early history of the phenomenon.

*Sources:*

"Chasing 'Flying Disk'." *Fargo* [North Dakota] *Forum* (October 3, 1948).

Gross, Loren E. *UFOs: A History—Volume 1: July 1947–December 1948*. Scotia, NY: Arcturus Book Service, 1982.

Keyhoe, Donald. *The Flying Saucers Are Real*. New York: Fawcett Publications, 1950.

Michel, Aimé. *The Truth About Flying Saucers*. New York: Criterion Books, 1956.

Ruppelt, Edward J. *The Report on Unidentified Flying Objects*. Garden City, NY: Doubleday and Company, 1956.

Steiger, Brad, ed. *Project Blue Book: The Top Secret UFO Findings Revealed*. New York: Ballantine Books, 1976.

Story, Ronald D., ed. *The Encyclopedia of UFOs*. Garden City, NY: Doubleday and Company, 1980.

"Wright Field Officers Probe 'Disk' Report." *Fargo Forum* (October 4, 1948).

**GREAT FALLS FILM.** See *Montana Film*.

### **GREEN FIREBALLS AND OTHER SOUTHWESTERN LIGHTS**

At 9:05 on December 5, 1948, a clear Sunday night, the pilot and copilot of an Air Force C-47 en route from Denver to Phoenix spotted a bright green flash just west of Las Vegas, New Mexico. The two observers assumed it was a meteor until 22 minutes later, when an identical phenomenon appeared as the aircraft passed some 20 miles northeast of Albuquerque. Capt. William Goade, the pilot, later told Air Force investigators that he had seen an intense green light rise from the east slope of Sandia Park a few miles away and follow a parabolic curve. If this was a flare, Goade thought, it was the weirdest one he had ever seen.

Goade and his copilot Maj. Roger Carter radioed the control tower at Kirtland Air Force Base in Albuquerque. Control personnel were sufficiently impressed that an hour and a half later, when a Pioneer Airlines flight landed in Albuquerque, they quizzed crew

members about any unusual sightings they might have had that evening, and from them they learned of an appearance of a green light at 9:35 as the aircraft was heading west toward Las Vegas. A little later the airline captain phoned the Kirtland tower to supply more details, explaining that he had been reluctant to say much more for fear of ridicule. He said the pale green light had come straight at him, causing him to swerve the plane to avoid what looked like an imminent collision. The light and its pale green tail curved downward and vanished after a few seconds.

That same evening a civilian driving on U.S. Highway 60 near Blanca, Colorado, saw a bright green fireball traveling west at great speed along a horizontal course.

The next day, concerned that the "flares" were the work of saboteurs, Lt. Col. Doyle Rees, commander of the Seventh District Air Force Office of Special Investigations (AFOSI) office at Kirtland, ordered an investigation. On the eighth two AFOSI officers, Capts. Melvin E. Neef and John Stahl, interviewed every agency that might know something about green-flare operations, but all professed ignorance. They decided to check the terrain where the incidents occurred, and so the two men, who were also pilots, flew a T-7 aircraft out of Kirtland in the early evening. Soon they were at 5000 feet. According to the official **Project Blue Book** report, this is what happened next:

At an estimated altitude of 2,000 feet higher than the airplane ... a brilliant green light was observed coming toward the airplane at a rapid rate of speed from approximately 30 degrees to the left of course, from 60 degrees ENE, to 240 degrees WSW. The object was similar in appearance to a burning green flare of common use in the Air Forces. However, the light was much more intense and the object appeared to be considerably larger than a normal flare. No estimate can be made of the distance or the size of the object since no other object was visible upon which to base a comparison. The object was definitely larger and more brilliant than a shooting star, meteor, or flare. The trajectory of the object when first sighted was almost flat and parallel to the earth. The phenomenon lasted

approximately two seconds at the end of which the object seemed to burn out. The trajectory then dropped off rapidly and a trail of glowing fragments reddish orange in color was observed falling toward the ground. The fragments were visible less than a second before disappearing. The phenomenon was of such intensity as to be visible from the very moment it ignited and was observed a split second later.

As word of the incidents got out, witnesses came forward to recount their own sightings. Army Col. William Hayes said he had seen such phenomena three times, most recently on November 23. In each case he had been driving near Vaughn, New Mexico, at around 10 in the evening; on each occasion he had observed an extremely bright white basketball-sized object coming straight down, only to explode without a sound into flaming red fragments which extinguished before they hit the ground.

On December 9 Neef informed Lincoln La Paz, director of the Institute of Meteoritics at the University of New Mexico in Albuquerque, of the recent events. La Paz, who held a Top Secret clearance, had already been consulted by the Air Force on UFO matters (and even participated in the investigation, according to testimony collected years later, of the 1947 Lincoln County, New Mexico, UFO-crash case generally known as the "Roswell incident" [Randle and Schmitt, 1991]). La Paz, one of the world's leading authorities on meteors, listened carefully and remarked that the fireballs sounded unlike any meteors with which he was familiar. Subsequently he reviewed his records of the Geminid meteor shower, prominent at that time of year, but they showed nothing about a green color associated with it. He had personally witnessed 414 Geminid meteors since 1915, and not one had been green. Not long afterwards La Paz got a letter from a University of New Mexico student who said he had seen a brilliant green "meteor" at 2 A.M. on December 5.

*Nuclear security.* Col. Rees was growing ever more alarmed. An incident on the sixth, at the supersecret Sandia Base at Kirtland, was especially disturbing. At 10:55 that evening Atomic Energy Security Service (AESS) officer Joseph Toulouse saw a "greenish flare" one-third the apparent size of the moon. It was visible

for three seconds before arching downward slightly and vanishing. Because Sandia was the place where America's atomic weapons were built, this was not an incident to be taken lightly, especially when that year had seen three other unexplained fireball cases, one of them near the Hanford nuclear facility in the state of Washington. Rees called an urgent meeting on the 11th, but nobody had any answers.

At 9:02 P.M. on December 12, as La Paz and two Kirtland officers were driving near Bernal, New Mexico, they saw a green ball traveling east to west low over the horizon. As bright as Venus and about one-fourth the apparent diameter of the moon, it stayed horizontal for most of the 2.2 seconds it was in view. Finally, in the last two-tenths of a second, it curved downward and was gone. By fortunate circumstance two AESS inspectors also saw the fireball, enabling La Paz to triangulate its location and altitude and estimate its speed.

When plotted on a map, the 25-mile east-to-west path pointed away from the Los Alamos Scientific Laboratory, the location of all American nuclear-design work. It was distinctly possible, in other words, that the fireball had flown directly over Los Alamos. But what particularly astonished La Paz was the object's ability to maintain a horizontal path at an altitude of eight to 10 miles while deep within the earth's atmosphere. In a confidential memo to Rees on December 20, La Paz wrote that the fireball had been too slow, too low, and too silent to be a conventional meteor. Moreover, "none of the green fireballs has a train of sparks or a dust cloud.... This contrasts sharply with the behavior noted in cases of meteoritic fireballs—particularly those that penetrate to the very low levels where the green fireball of December 12 was observed.... On the basis of the various differences ... the writer remains of the opinion that the fireball ... was definitely non-meteoritic and that in all probability the same is true of most, if not all, the other bright green fireballs...."

La Paz arranged with the AESS to set up a patrol with Speed Graphic cameras to try to photograph the fireballs. Late on December 20, after two nights with no green fireballs, members were packing up the cameras when one of the objects made a characteristically brief appearance. Still, because it was seen by

ites that move over long horizontal paths reserving nearly constant angular velocities and therefore, on the average, constant linear velocities, at elevations of the order of eight to 10 miles.... [T]he fireball which I personally witnessed on the night of December 12, 1948, was not, in my opinion, a conventional meteor fall" (Moore, 1983).

Agreeing that the phenomenon was real, the scientists urged that a network of instrument stations be put in place so that the fireballs could be photographed and analyzed with instruments at the moment of their appearance. Teller remarked that his calculations of the expected noise level of any material object with the green fireball's features indicated not a solid but an electro-optic phenomenon.

Afterwards the AFOSI district office at Kirtland sent a priority Secret message to its headquarters and to Air Materiel Command (AMC) at Wright-Patterson pleading for assistance and advice. In its reply headquarters asked the Kirtland office what were the "instructions and/or equipment furnished you by Air Materiel Command regarding aerial phenomena." None, Kirtland responded, then went on to complain that AMC, which oversaw Sign and Grudge, had broken its promise to attend the Los Alamos meeting. Apparently AMC was indifferent both to the reports and to AFOSI's considerable investigative effort.

The same day, April 23, Capt. Roger Groseclose and Lt. Howard Smith were sent from AMC to Kirtland to mollify the unhappy personnel at AFOSI, Kirtland. The following day they had an unpleasant exchange with Capt. Neef, La Paz, Agent Jack Boling, and the Fourth Army's Maj. Godsoe (who had attended the February 16 meeting) in the AFOSI office. Godsoe said that it didn't seem worth AFOSI's time to conduct investigations for AMC, which seemed singularly ungrateful for the favor. The AMC officers retorted that the fireballs were no concern of an Army officer's anyway. Neef in turn wondered if they were any concern of AMC's. After all, green fireballs were different from flying discs. Groseclose and Smith said they were concerned with all types of anomalous aerial phenomena. By this time thoroughly disgusted, Godsoe left the room.

Groseclose and Smith turned on La Paz with a new

list of complaints. Why had he sent AMC his raw data rather than finished analyses? That way other technical personnel could review his work to ensure that he had come to the appropriate conclusions. La Paz pointed out that he had been working as a volunteer on leave from his university job, to which he now had to return. Any further request for his services would have to come with a contract.

Before the meeting broke up, the participants were able to agree with the now-absent Godsoe's recommendation that AMC set up a network of observation posts with cameras, surveyor's transits, and trained personnel. In addition, there should be a concerted air and ground search for fragments. Finally, Neef emphasized to Groseclose and Smith that personnel charged with protection of the Atomic Energy Commission bases were "becoming alarmed as to the possible threat to their security."

On the nineteenth, four days before the confrontation at its office, AFOSI at Kirtland sent a list of all the fireball reports it had investigated (39 in all), from December 5 to April 12, to Air Force headquarters. The cover letter noted, "The common characteristics of most of the incidents are: a. Green color, sometimes described as greenish-white, bright green, yellow-green, or blue green. b. Horizontal path, sometimes with minor variations. c. Speed less than that of a meteor, but more than any other known type of aircraft. d. No sound associated with observation. e. No persistent trail or dust cloud. f. Period of visibility from one to five seconds" (*ibid.*).

But green fireballs were not the only sorts of atmospheric anomalies appearing in Southwestern skies. At 10:30 on the morning of the twenty-fourth, at the White Sands Proving Ground, military personnel were tracking a balloon when a fast-moving disc-shaped object showed up and was tracked through a theodolite. At 6:30 A.M. the next day, according to a young man who reported the event in a letter to La Paz, silvery-white, ball-shaped objects "sort of like Christmas tree ornaments" flew over Springer Lake, New Mexico, moving at a rapid rate of speed. They reappeared repeatedly over the next hour, making a sound like a "high-pitched whistle," but were never visible for more than a few seconds at a time. This report was reminiscent of ones being made in Texas

(see below). At 5:45 P.M. on the twenty-eighth an object with a sausage shape, "with no fins, wings, or protuberances" and the "size of a city block," was seen over Tucson by many observers (Gross, *op. cit.*).

*Little lights.* A new type of UFO phenomenon began manifesting in central Texas on March 6, when Army security patrols near Killeen Base, a highly sensitive nuclear-weapons storage site inside Camp Hood, spotted strange bursts or streaks of light in the evening sky.

The first sighting took place outside the base perimeter at 8:30 when Pvts. Martin Fensterman and Frank Luisi spotted a flash of pale blue-white light in the northeast. Twenty-five minutes later and a quarter-mile away, Pvt. Harold Moore saw a white light with an orange trail flash across the western horizon. And at 9 P.M., from inside the base boundary, Sgt. Hubert Vickery and Pfc. John Ransom noticed a pale blue-white light streaking across the western sky low over the horizon. Between 1:15 and 2 A.M. four more reports of a brilliant burst of light like a "flash bulb" came in from patrols around Killeen Base.

Almost exactly 24 hours later, on March 8, two infantrymen half a mile apart sighted apparently separate streaking bright lights—one white, the other yellowish-red. In the latter case the UFO covered 60 degrees of sky, appearing and disappearing at about the same angle above the horizon. Cpl. Luke Sims was able to run 10 paces to a field telephone before it vanished.

All of the observers insisted that what they had seen were not meteors. They were more like flares, they said, but they could not find anyone who might have been shooting them off. Nonetheless Capt. Horace McCulloch, Assistant G-2 of the Second Armored Division at Camp Hood, was certain they must be flares. It was just "nervous tension or lack of experience on the part of the observers" that made the witnesses think the phenomena were extraordinary. He decided to gather the witnesses at their respective sighting locations and test-fire various kinds of flares. The test was set for the evening of the seventeenth. But when Capt. McCulloch and his party were driving between Camp Hood and the Killeen Base area to prepare the proposed display, they saw the phenome-

non themselves. McCulloch knew it was no flare, and so he placed the entire base on alert.

There were seven sightings in all that night. Each time multiple observers in different locations were able to effect precise triangulations.

On March 31 at 11:50 P.M. Lt. Frederick Davis, who was on patrol east of Killeen Base, sighted a reddish-white ball of fire passing horizontally over the base airstrip. After 10 to 15 seconds it disappeared without descending. As Davis was reporting the incident, he noted interference on the telephone line.

In mid-April, amid growing alarm among Fourth Army Intelligence personnel in San Antonio, investigators remarked on how the lights had done a "good job of bracketing the 'Q' Area" ("Q" refers to nuclear materials). Just a few days earlier, they pointed out, gossip columnist Walter Winchell had broadcast the story that the Russians were launching the flying discs. On the fourteenth Col. Reid Lumsden, Commander of the AFOSI district office at Kelly Air Force Base, San Antonio, handed the Army reports to Col. William Carpenter, the Deputy Director of Special Investigations, at the Pentagon. Carpenter promised to pursue inquiries from his own end.

*Green fireballs continued.* In New Mexico the green-fireball sightings continued, at the rate of half a dozen or so a month. Meanwhile AMC and its new Project Grudge responded only perfunctorily to the reports they were receiving from the Fourth Army and the Seventeenth District AFOSI office; they did little more than supply copies of a report form.

Observing this exhibition of apathy, Col. Doyle Rees, 17th District AFOSI Commander, wired headquarters on April 25 to ask if he could send two of his men to AMC to find out if Grudge planned to do anything. But as it turned out, not only AFOSI was monitoring Grudge's inactivity but Air Force Intelligence was doing so as well. Before Rees had a response from AMC, Dr. Kaplan arrived in Albuquerque, having been directed to go there by no less than AFOIN Director Maj. Gen. Charles Cabell and Air Force Scientific Advisory Board chairman Theodore von Karman, who wanted Kaplan to examine the possibility of setting up a full-scale field investigation. They emphasized that Grudge was not to be informed of it.

On the morning of the twenty-seventh Rees, Kaplan, and La Paz briefed personnel with the Armed Forces Special Weapons Project at Sandia Base. La Paz outlined plans for a network of visual, photographic, spectrographic, and radar observation covering the Los Alamos, Sandia (Albuquerque), and Holloman Air Force Base/White Sands Proving Ground areas, with extensive field searches and aerial reconnaissance to locate fragments. Scientist W. D. Crozier, late of White Sands, now of the New Mexico School of Mines, offered to handle air sampling intended to detect any dust residue from the fireballs' passage. Rees urged that the Camp Hood/Killeen Base area also fall under scrutiny. Kaplan said he would recommend La Paz to direct the probe, with the full cooperation of all other agencies.

*Little lights again.* On the nights of April 16 and 18, after two weeks of inactivity, the mysterious "flares" were observed once more at Killeen. The most spectacular incidents, however, would occur on the twenty-seventh, beginning with a bizarre encounter at 9:20 P.M. when two members at a patrol station southeast of Killeen were startled to see a blinking violet light no more than an inch and a half in diameter; it was only 10 or 12 feet from them and six or seven feet above the ground. The observation lasted a minute, during which the tiny object passed through the branches of a tree, thus unmistakably marking its location.

Five minutes later and scarcely two miles away, four Army men saw a four-inch bright light with a two- to four-inch "metallic" cone attached to the back. When first spotted in the northeast, it was six to seven feet off the ground and 600 feet away, silently approaching the witness in a level flight at 60 or 70 mph. It disappeared suddenly to the southwest at a distance of 150 feet. Then, just 12 minutes later, a two-inch-wide white light appeared 100 feet away to the north-northeast. It was flying in a zig-zag fashion in a level path six feet above the ground. At its closest it was 150 feet away. Like the one that had come before it, it vanished abruptly. A third light showed up at 9:39 in the west-southwest. It was visible for a maximum of 30 seconds.

The next night the lights were back. Beginning at 8:30, several security patrols comprising a total of 12

men reported nine separate sightings southeast of Killeen. Most of the slow-moving lights changed color from white to red to green. One was white with a red blinking light, and one had the previously observed "cone-shaped affair" at its rear. On one occasion four lights appeared together; on another, eight to 10 showed up in each other's company. (The light with the cone was seen amid this latter set of objects.) Despite extensive searches no debris or other evidence of flares or similar devices could be found.

In early May the Fourth Army approached AFOSI in San Antonio to ask it to help in the investigation of the Killeen lights. Col. Lumsden declined, explaining it was waiting direction from headquarters in Washington. But the harried Army people were disinclined to take no for an answer, and on May 5 they got AFOSI personnel, along with others from the Office of Naval Intelligence (ONI), Army Counter Intelligence Corps (CIC), the FBI, and the Armed Forces Special Weapons Project (AFSWP), to show up at Camp Hood for the first of a series of weekly meetings to discuss the strange phenomena.

The Army and Navy representatives agreed that the phenomena were unexplained and thus a legitimate source of "grave concern." AFOSI and the FBI expressed no opinion, but the AFSWP people expressed confidence that a natural explanation would be found and that the base's internal security could handle any problems, if such ever manifested. Fourth Army retorted that doubts about the quality of its witnesses' observations could be resolved if a formal observing network were set up. Unfortunately, it did not have enough agents to conduct a proper investigative job. Moreover, there were questions about who would lead such an investigation, since security responsibilities were divided among the various agencies.

Out of this confused state of affairs came general agreement that, first, an observation system with trained artillery observers was desirable and, second, if such sightings were then confirmed, AMC in Ohio should be asked to send a technical intelligence team to the scene. For reasons of its own the Army did not reveal it had already put such a network into operation the day before. Nonetheless it took the entire group out to Killeen at 1 P.M. to inspect the security

procedures and “tentatively” select sites for the Army observation posts—sites that in fact had been selected and manned at least 24 hours earlier.

The next day Col. Lumsden of the San Antonio AFOSI office informed headquarters that the “matter has reached a fairly serious stage and some positive action is mandatory.” He made a point of not sending a copy of his message to Grudge. Headquarters responded quickly with an order to Lumsden to investigate all sightings and other relevant information. There was also a pointed reminder that Grudge was to be kept fully informed.

At AFOSI in Albuquerque Col. Rees set up a 24-hour visual-photographic observation post on top of Sandia Mountains northeast of town. Following Kaplan’s suggestion, the post was equipped with a wide-angle lens camera fitted with a spectrographic grating. The Fourth Army system was more elaborate, except that it lacked cameras. But it did have four six-man fixed-observation posts equipped with instruments to obtain directional bearings and linked by radio and field telephone. One of the posts (all were located within a few miles southeast of Killeen) served as the plotting center to coordinate and triangulate the UFO sightings and directional information from all observers. Two trucks served as a roving “Artillery Patrol” observation post linked by radio to the plotting center. Each day the “Artillery Training Force” (the deliberately misleading name by which the classified UFO patrol was designated) got new orders.

When the Fourth Army plan was finally revealed on May 19 to members of the weekly intelligence conference, everyone was impressed. There was no more talk of hysteria or observer error. Now, as Col. Lumsden subsequently remarked, it was obvious that the “unknown phenomena in the Camp Hood area could not be attributed to natural causes.”

Nonetheless in Washington the word was that the fireballs were “natural phenomena.” Or so concluded Kaplan, who thought they were a new type of auroral effect. He conceded, however, that their rapid horizontal motion and their appearances so far from the magnetic polar regions were “difficult to explain.” AFOIN “tentatively accepted” the explanation despite its problems, and the Geophysical Sciences Branch of the Directorate of Research and

Development, USAF Headquarters, began an evaluation of the reports. If its findings “substantiate this tentative conclusion,” Col. John W. Schweizer of AFOIN said in a September 1 letter to AFOIN’s director, “reports that fall in the ‘fireball’ category will no longer be included in Hq. Air Materiel Command and Directorate of Intelligence, Hq. USAF, investigative activity on unidentified aerial incidents.” AFOIN rejected an Army request for further facilities to study the fireballs from field locations.

The sightings continued into August. The most spectacular took place on June 6. At 9:05 P.M. both the plotting center and observation post number two spotted a hovering orange light. When they triangulated the UFO’s location, they determined it was three miles south of the observation post and four and a half miles south of the plotting center, hovering a mile in the air. This was, however, no “little light” but something 30 to 70 feet in size. Suddenly it started moving in level flight, then burst into small particles. The sighting had lasted not quite three minutes.

On July 24 a green fireball was observed falling close to Socorro, New Mexico. The next morning Crozier collected dust samples from the School of Mines campus in the city. As La Paz reported to Col. Rees on August 17, “These collections, to Dr. Crozier’s evident surprise, were found to contain not only the first copper particles he had found in air dust collections but these particles were of unusually large size—up to 100 microns in maximum dimensions” (Moore, *op. cit.*). When La Paz and other scientists and Air Force representatives met with Crozier the following day, Crozier said he thought it was possible the copper particles had blown off the roof or out of the gutters of a campus building; only if similar particles were found in open and distant country could they be deemed unquestionably significant. Subsequent searches found just that. Still, Crozier persisted in calling the results “inconclusive” even as La Paz suspected otherwise, writing to Rees, “I wish to emphasize most emphatically that if future more detailed work shows that the numerous copper particles found by Dr. Crozier and [his assistant] Mr. [Ben] Seely *are* indeed floating down from green fireballs, then the fireballs are not conventional meteorites. Copper is one of [the] rarest of the elements found in

meteorites.... In fact, I know of no case in which even the tiniest particle of copper has been reported in a dust collection supposedly of meteoritic origin" (*ibid.*). La Paz urged that further air and ground samples be taken in areas where the fireballs had been seen.

In a memo of the same date addressed to La Paz, Rees reported on investigations of "anomalous luminous phenomena" seen between early June and early August. "Many of the green fireballs now appearing descend on nearly vertical paths," he wrote, "whereas, in earlier months[,] almost all of the green fireballs observed move almost horizontally.... There appears to be a concentration of New Mexico incidents near weekends, especially on Sunday and near the hour of 8:00 (in the interval from 7:30 P.M. to 8:30 P.M.)" (*ibid.*).

*Project Twinkle.* In early summer Kaplan met with Norris Bradbury, the Los Alamos laboratory director who had participated in the February 16 Conference on Aerial Phenomena. Bradbury urged that a classified scientific conference be held to discuss the fireballs, perhaps when Kaplan was passing through in early September, and that physicists Edward Teller and George Gamow be invited. Kaplan then told AFOIN Director Gen. C. B. Cabell that AFOIN should organize a photographic and spectrographic patrol which could obtain quantitative scientific data on the phenomena. Because of budgetary and personnel limitations AFOIN could not act on the suggestion, but later in the summer Kaplan visited the Geophysics Research Directorate of AMC's Cambridge Research Laboratories in Boston and discussed what could be done in fireballs. In Washington soon afterwards, Kaplan met with personnel in the Geophysical Sciences Branch of Air Force Research and Development to set plans in motion. On September 14, under the authority and command of Air Force Chief of Staff Gen. Hoyt S. Vandenberg, that branch ordered the new AMC commander Lt. Gen. Benjamin Chidlaw to have his Boston labs evaluate the New Mexico and Texas sightings and consider the creation of an instrument network. AMC was directed to send representatives from Boston to a meeting in New Mexico.

At the meeting, held on October 14 at Los Alamos, 16 representatives of AFOSI, AMC (Kaplan), Fourth Army, the FBI, the AESS, AFSWP, and Los Alamos scientists (including such luminaries as Teller, Gamow,

and Stanislaw Ulam) considered the situation. AMC's representative was Maj. Frederic C. E. Oder, director of the Boston geophysics laboratory. La Paz and Capt. Neef spoke at length and recounted their own and other sightings. No one disputed the reality of the phenomena, and the group could not agree on an explanation. One problem was the peculiar geographical concentration of reports: all in New Mexico. What kind of natural phenomenon would appear in only one place and only recently? The group proposed that a field project be run under Oder's Boston lab, with La Paz's active cooperation.

On November 3 Kaplan brought the plan to AFSAB, and on December 20, following consideration by the Defense Department's Research and Development Board (RDB), approval was granted. By February 21, 1950, Project Twinkle, with the assistance of Land-Air, Inc., had set up its first operations post, manned by two observers who scanned the sky over Holloman AFB with theodolite, telescope, and camera.

All the while the sightings had continued. At 10:15 P.M. on January 7 Holloman's assistant maintenance officer was driving south of Corona, New Mexico, when he saw a green ball at 45-degrees' elevation. He told AFOSI investigator Lt. Russell Womack, Jr., that it descended at a 60-degree angle "from horizontal to a position just above the horizon caused by the mountain range where it leveled out and traveled approximately 10 degrees east," then dropped out of sighting behind the mountain. When first seen, it was a yellowish-white, but as it descended, it "appeared to be more orange than originally with a trail of flame projecting out to its rear.... When it reached the position where it leveled out, it became a bright blue-green in color and remained that color until it passed out of sight" (Gross, 1983).

On February 2 La Paz, citing the press of academic duties, was forced to withdraw from further participation in the project. On the twentieth, in a two-page letter to P. H. Wycoff of the Air Force Cambridge Research Laboratories, he expressed his current views: that a "fireball project" (Twinkle) ought not to be pursued because those fireballs that were not meteors had to be "U.S. guided missiles undergoing tests in the neighborhoods of the sensitive installations they are designed to defend." He confessed that he

doubted the latter interpretation "will be taken seriously" and conceded he could be wrong. In that case "intensive, systematic investigation of these objects should not be delayed" (Moore, *op. cit.*).

Despite high hopes Twinkle proved something of a hapless enterprise. A few lines from its final report, dated December 11, 1951, give a sense of what its problems were:

Some photographic activity occurred on 27 April and 24 May [1950], but simultaneous sightings by both cameras were not made, so that no information was gained. On 30 August 1950, during a Bell aircraft missile launching, aerial phenomena were observed over Holloman Air Force Base by several individuals; however, neither Land-Air nor Project personnel were notified and, therefore, no results were acquired. On 31 August 1950, the phenomena were again observed after a V-2 launching. Although much film was expended, proper triangulation was not effected, so that again no information was acquired.... Generally, the results ... may be described as negative. Although the photographic theodolites functioned continuously, the grating cameras functioned very little, since the military personnel assigned to operate them had been withdrawn due to the needs concerned with the Korean situation. The facilities for the electromagnetic frequency measurements that were to be provided by the Signal Corps Engineering Laboratories were not utilized due to the fact that the frequency of occurrence of these phenomena did not justify the \$50,000 a year transfer of funds to the Signal Corps which would be required to carry out such a monitoring facility (*ibid.*).

After that the number of sightings declined significantly. In the summer of 1951 Maj. Edward A. Doty took control of the project. In an August 27 conference at Holloman he expressed skepticism, and his assistant, one B. Guildenberg, told those there assembled that despite his active interest in astronomy he had never seen anything out of the ordinary in the sky, and neither had one of White Sands' most prominent persons, Clyde Tombaugh, discoverer of the planet Pluto. (The **Clyde Tombaugh sighting** of 1949

is discussed elsewhere in this book.) Holloman's commanding officer, Doty said, wanted to cease allocating funds for Twinkle, strip it of its official status, and maintain it simply on stand-by status.

The next day project personnel talked with La Paz, who once again insisted the phenomena could not be meteors.

Twinkle closed down in December. Its final report stated that the investigators had no "conclusive opinion concerning the aerial phenomena of interest." Nonetheless it went on to speculate that the "earth may be passing through a region in space of high meteoric population. Also, the sun-spot maxima in 1948 perhaps in some way may be a contributing factor" (Moore, *op. cit.*).

Still, to many of those who had seen or investigated the fireballs (or both), they remained a troubling memory. In 1953, when Capt. **Edward J. Ruppelt** was head of Project Blue Book, he encountered Joseph Kaplan at an Air Force meeting in Los Angeles. Kaplan asked, "What ever happened to the green fireballs?" He urged Ruppelt to talk with La Paz. A few months later, when Ruppelt finally met the meteoriticist, he asked him what he thought the fireballs were. According to Ruppelt, "He weighed the question for a few seconds—then he said that all he cared to say was that he didn't think they were a natural phenomenon. He thought that maybe someday one would hit the earth and the mystery would be solved. He hoped they were a natural phenomenon." At Los Alamos, Ruppelt would write, scientists theorized that the fireballs were projectiles fired into the earth's atmosphere from an extraterrestrial spacecraft. "Two years ago I would have been amazed to hear a group of reputable scientists make such a startling statement," Ruppelt recalled. "Now, however, I took it as a matter of course. I'd heard the same type of statement many times before from equally qualified groups" (Ruppelt, 1956).

*Sources:*

Aggen, Erich A., Jr. "Green Fireballs." *MUFON UFO Journal* 271 (November 1990): 10-11.

Gross, Loren E. *UFOs: A History—1950: January-March*. Fremont, CA: The Author, 1983.

—. *UFOs: A History, Vol. 1—July 1947-December 1948*. Fremont, CA: The Author, 1982a.



- *Missing Time: A Documented Study of UFO Abduction Reports*. New York: Richard Marek Publishers, 1981.
- *Intruders: The Incredible Visitations at Copley Woods*. New York: Random House, 1987.
- Keel, John A. *Strange Creatures from Time and Space*. Greenwich, CT: Fawcett Gold Medal, 1970.
- Petrenko, Yuriy B. "Mail Bag: Forerunner of the Flying 'Lady' of Vietnam?" *Flying Saucer Review* 19, 2 (March/April 1973): 29-30.
- Phillips, Gene M. *"Come Search With Us!"* Highland Park, IL: Ancient Astronaut Society, 1988.
- Story, Ronald. *The Space-Gods Revealed: A Close Look at the Theories of Erich von Däniken*. New York: Harper and Row, 1976.
- Taylor, Sinclair. "True Mystic Experiences: The Bird Thing." *Fate* 13, 12 (December 1960): 53-54.
- Von Däniken, Erich. *Chariots of the Gods?* New York: G. P. Putnam's Sons, 1969.
- "Winged Wonder Over Falls City?" *Journal of the Fortean Research Center* 1, 1 (April 1986): 3-4.
- Worley, Don. "The Winged Lady in Black." *Flying Saucer Review Case Histories* 10 (June 1972): 14-16.

## Green Fireballs

A strange aerial phenomenon briefly appeared in the Earth's lower atmosphere for a three-year period between late 1948 and 1951. For a time sightings, virtually all of which occurred in the southwestern United States, were taking place with such intensity that military and civilian government agencies feared enemy agents had penetrated some of America's most sensitive national-security bases.

The epidemic of "green fireballs" first attracted official attention on the evening of December 5, 1948, when pilots flying over New Mexico reported two separate observations, twenty-two minutes apart, of a pale green light that was visible for no more than a few seconds. The witnesses insisted these were not meteors but flares of a decidedly peculiar kind. On the sixth, a similar "greenish flare" was sighted for three seconds over the supersecret atomic installation Sandia Base, part of the Kirtland Air Force Base complex in New Mexico.

That same day the Seventh District Air Force Office of Special Investigations (AFOSI), at Kirtland, commenced a probe. On the evening of the eighth, the two investigators, both pilots, saw one of the objects from their T-7 aircraft. They described it this way: "At an estimated altitude of 2000 feet higher than the airplane . . . [t]he object was similar in appearance to a burning green flare of common use in the Air Forces. However, the light was much more intense and the object appeared to be considerably larger than a normal flare. No estimate can be made of the distance or the size of the object since no other object was visible upon which to base a comparison. The object was definitely larger and more brilliant than a shooting star, meteor, or flare. The trajectory of the object was almost flat and parallel to the Earth. The phenomenon lasted approximately two seconds at the end of which the object seemed to burn out. The trajectory then dropped off rapidly and a trail of glowing fragments reddish orange in color was observed falling toward the ground. The fragments were visible less than a second before disappearing. The

The June 1957 cover of *Fate* magazine depicts mysterious green fireballs.

(Courtesy Llewellyn Publications/Fortean Picture Library.)

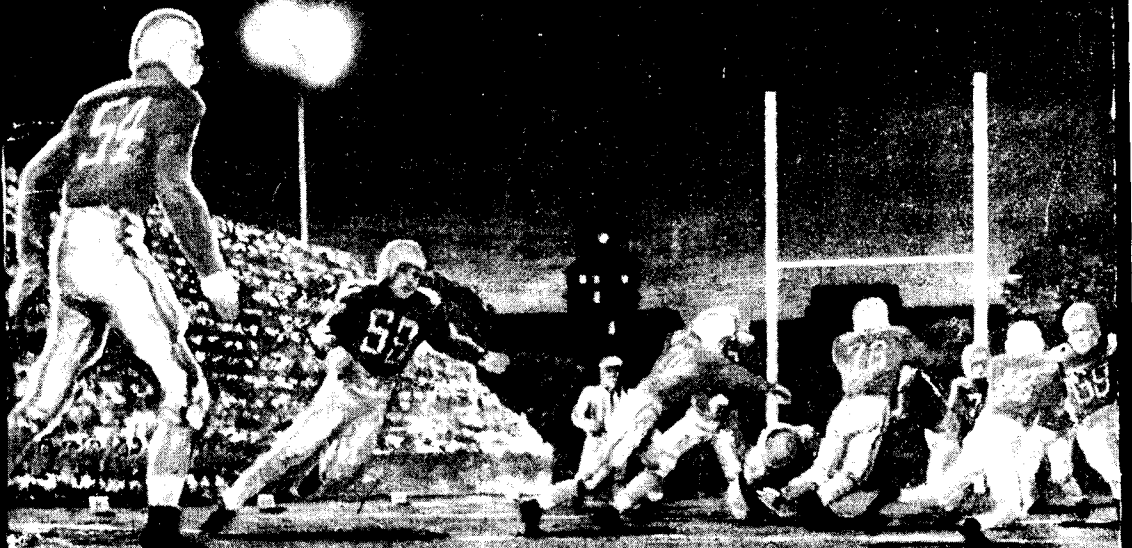
Mystery of the **GREEN FIREBALLS**

**FATE**

M A G A Z I N E

TRUE STORIES OF THE  
STRANGE AND THE  
UNKNOWN

June 1957 35c



**FRANK EDWARDS: The Plot to Silence Me**

## Intruders Foundation

The Intruders Foundation (IF) is the creation of Budd Hopkins, author of two popular books on the UFO-abduction phenomenon. It came into being largely in response to the enormous number of letters Hopkins was receiving both from persons who claimed they, too, had had abduction experiences similar to those Hopkins had written about and from scientists, mental health professionals, and investigators who wanted to offer their services.

In May 1989, having secured funding from a private source, Hopkins hired secretarial help to assist him in sorting through the mail and putting it in order. By now Hopkins had established an informal network of psychotherapists and could direct inquirers requiring immediate attention to the nearest available professional. What he felt he needed now was a formal structure.

"We had a large number of needy people out there who needed a foundation to address their concerns," he said. "I was being asked by many people to start a not-for-profit foundation to fund research and therapeutic help. From the research point of view, of course, abduction study is the richest vein to mine, in terms of the amount of information about the UFO phenomenon it is going to bring out. But even more than that, abductees need help on all levels."

The first issue of *IF: The Bulletin of the Intruders Foundation*, dated Fall 1989, appeared in March 1990 and has averaged an issue a year since then. Each issue contains interesting material on cases, investigations, and abduction-related issues. Although the operating assumption is that abductions are real, event-level experiences, the treatment is sober, intelligent, and minimally speculative. The newsletter is edited by Penelope Franklin. Founder Budd Hopkins remains an active investigator, writer, and lecturer.

phenomenon was of such intensity as to be visible from the very moment it ignited and was observed a split second later."

The next day one of the officers, Capt. Melvin E. Neef, conferred with Lincoln La Paz, director of the University of New Mexico's Institute of Meteoritics and an Air Force consultant with Top Secret clearance. La Paz said these were unlike any meteors he had ever heard of. Within days La Paz had seen one of the objects himself. Two inspectors from the Atomic Energy Security Service (AESS) independently witnessed it; from their observation and his own, La Paz was able to establish that it had flown too slowly and too silently to be a meteor. He wrote in a confidential letter to the Seventh District AFOSI commanding officer that "none of the green fireballs has a train of sparks or a dust cloud. . . . This contrasts sharply with the behavior noted in cases of meteoritic fireballs – particularly

those that penetrate to the very low levels where the green fireball of December 12 was observed.”

Acting on La Paz's suggestion, the AESS organized patrols to try to photograph the fireballs. As the sightings continued, scientists and engineers at New Mexico's Los Alamos Scientific Laboratory set up an informal group to evaluate the reports, and the Army and the Air Force grew increasingly concerned. By late January, 1949, La Paz, who had interviewed witnesses to some of the sightings, was convinced the objects were artificial.

On February 16, a “Conference on Aerial Phenomena” brought military officers and scientists to Los Alamos, where they were told that whatever the nature of the objects, they were not the product of a “classified training exercise.” La Paz challenged conference participants to “find anywhere among meteorites examples of conventional meteorites that move over long horizontal paths reserving nearly constant angular velocities and therefore, on the average, constant linear velocities, at elevations of the order of eight to 10 miles.”

Late in April Major Charles Cabell, director of Air Force Intelligence in the Pentagon, and Theodore von Karman, chairman of the Air Force Scientific Advisory Board, dispatched physicist Joseph Kaplan to Kirtland. Kaplan, La Paz, and others discussed plans to establish an observational and instrumental network around several New Mexico installations. Meanwhile, since early March tiny white lights or “flares” had appeared regularly near Killeen Base, a nuclear-weapons storage site inside Camp Hood in central Texas, leading both to high-level alarm and to efforts to set up observation posts. Col. Reid Lumsden, commander of AFOSI at Kelly AFB, San Antonio, declared that the “unknown phenomena in the Camp Hood area could not be attributed to natural causes.”

The testimonies of virtually all local experts and witnesses notwithstanding, the word came down from Washington: the fireballs and lights were natural even if they had features that were, as Kaplan acknowledged, “difficult to explain.” Yet the sightings continued, and in the summer analyses of samples of the New Mexico atmosphere revealed an unusually large and unexplained quantity of copper particles, apparently associated with the fireball sightings. “I know of no case in which even the tiniest particle of copper has been reported in a dust collection supposedly of meteoritic origin,” La Paz wrote to Lt. Col. Doyle Rees.

After meeting with high-ranking Air Force intelligence and scientific personnel, Kaplan urged the creation of a photographic and spectrographic patrol whose purpose would be to obtain quantitative data on the fireballs and lights. A Los Alamos conference discussed the situation and backed the plan, to be run by the Air Materiel Command's Cambridge Research Laboratories. Project Twinkle was established, and it set up shop with an operations post manned by two observers at Holloman AFB in New Mexico. One of its critics was La Paz, who thought the matter was of sufficient gravity to deserve a far more “intensive, systematic investigation.”

Despite some interesting sightings, Twinkle shut down in December 1951, owing to the incompetence of its personnel, poor funding, bureaucratic infigh-

ing, and inadequate instrumentation. It was a tragically missed opportunity to obtain solid information on at least one kind of unidentified flying object. Many of the scientists who participated in the investigation remained convinced that the fireballs were artificially created. In 1953, when Capt. Edward J. Ruppelt, head of the Air Force's Project Blue Book, talked with Los Alamos scientists about the episode, they expressed the conviction that the objects were projectiles fired from extraterrestrial spacecraft.

### Sources

- Clark, Jerome. "UFO Reporter: Help for Abductees." *Fate* 43, 7 (July 1990): 30-33.
- . *The Emergence of a Phenomenon: UFOs from the Beginning Through 1959 - The UFO Encyclopedia, Volume 2*. Detroit, MI: Omnigraphics, 1992.
- Gross, Loren E. *UFOs: A History - 1950: January-March*. Fremont, CA: The Author, 1983.
- . *UFOs: A History, Vol. 1 - July 1947-December 1948*. Fremont, CA: The Author, 1982.
- . *UFOs: A History, Vol. 2 - 1949*. Fremont, CA: The Author, 1982.
- Hopkins, Budd. "An Introduction to IF - the Intruders Foundation." *IF* 1, 1 (Fall 1989): 1-2.
- Moore, William L., ed. *The Mystery of the Green Fireballs*. Prescott, AZ: William L. Moore Publications and Research, 1983.
- Ruppelt, Edward J. *The Report on Unidentified Flying Objects*. Garden City, NY: Doubleday and Company, 1956.
- Sparks, Brad, and Jerome Clark. "The Southwestern Lights." *International UFO Reporter* Pt. I, 10, 3 (May/June 1985): 10-13; Pt. II, 10, 4 (July/August 1985): 12-14; Pt. III, 10, 5 (September/October 1985): 7-12, 15-16, 18.

## Hangar 18

In the 1960s Sen. Barry Goldwater, Republican of Arizona and a brigadier general in the U.S. Air Force Reserve, asked a friend, Gen. Curtis LeMay, for a favor. Senator Goldwater wanted access to a room at Wright-Patterson Air Force Base, Dayton, Ohio, where he had long heard that UFO wreckage and bodies were stored. As the Senator recalled years later in a *New Yorker* profile, General LeMay "just gave me holy hell. He said, 'Not only can't you get into it but don't you ever mention it to me again.'"

Within days of the inception of the UFO age in the early summer of 1947, the world press reported that representatives of the Army Air Force had recovered the remains of a "flying disc" that crashed in remote Lincoln County, New Mexico. Within hours a "correction" went out on the wires, with officials at Eighth Army Headquarters in Fort Worth, Texas, assuring reporters that through a ludicrous misunderstanding the wreckage of a weather balloon had been mistaken for something extraordinary. (Meanwhile, the material reportedly was secretly flown to Wright Field, subsequently renamed Wright-Patterson AFB at Dayton, Ohio.) This identification, now known not to be true, was widely accepted, and the story died a quick death. The episode would survive only as a small footnote in UFO history