

UFOs AND BALL LIGHTNING

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AT long last UFOs are becoming legitimate objects of scientific interest. Professional scientists are realising that there is "paydirt" beneath the mountains of rubbish. I want to show that it can be found not only amongst the residue of genuine unexplained incidents but also in the very rare natural phenomena that must be invoked to explain some reports.

Imagine a car being vengefully followed along a dark road by a glowing football; or a globe of fire swooping down from the sky to remain stationary near the ground, and then exploding; or a silent sphere of light floating through a closed window into a room, before the eyes of a terrified witness. All these, and many thousands more, are genuine examples of ball lightning. It is not far from them to several UFO reports I have heard: a "toy balloon" that drifted lazily over some trees near Woodbridge; or an irregularly edged rectangle of glowing coals that floated softly behind some houses at Stroud; or a ball of fire that fell from a cloud near Cheam and exploded with a loud bang.

Similarities

No one can ever be sure that a particular UFO report was definitely caused by ball lightning, but a significant number have all the right characteristics. Even more have great similarities, but would not fit precisely with what is known about the phenomenon at present. Perhaps anything between one and five per cent of all UFO reports fall into this category. I am at present engaged in a project to collect accounts of ball-lightning-like objects and would be very grateful for any that readers could send me. So here are the details of what lightning balls are believed to look like.

Appearance. Ball lightning is generally spherical or ellipsoidal, but sometimes cylindrical, about as bright as domestic light bulbs. Usually they are uniformly bright and of a single colour all over, but sometimes the centre may be brighter than the edge, or vice versa. All colours have been reported, with white and reddish orange the most common. Their size is generally a matter of inches, but a small proportion are up to several feet across. A variety of "electrical" noises have been reported, such as hissing, crackling or buzzing, and close encounters frequently give a smell of ozone. Accounts by witnesses will always be distorted by perceptual inaccuracies and often by sheer fright.

Motion. Occasionally the tip of a lightning flash may actually be seen descending from the cloud. Appropriately this is called Rocket Lightning, and it can perhaps

be regarded as a descending lightning ball. Balls of fire may often be seen running or rolling along metal surfaces, particularly aircraft: this too is an allied phenomenon, more familiar as St. Elmo's Fire. Most of the cases of ball lightning that are significant as UFO reports move freely in the air, regularly or irregularly, horizontally or vertically, with, or sometimes against, the wind, and at speeds less than 50 m.p.h. They may appear to spin or pulsate. Closed spaces seem to have a bizarre attraction for ball lightning: cases are on record of them coming down chimneys, squeezing through a keyhole, flying through a closed window, and even entering under a woman's petticoat! They are usually only seen to last a few seconds, but a small proportion persist for minutes. They end either with a loud bang or by abruptly disappearing, not by gradually fading away.

Occurrence. The majority of ball lightnings are preceded by a lightning flash, when their cause is immediately apparent. These seem to form near the foot of a lightning path to ground. However, the cases that give rise to UFO reports are more likely to be either when there is no lightning flash, or else when it is not seen. Quite a few are seen just floating freely in the air, some even in relatively clear weather. Most bizarre of all are those reports associated not with any electrical disturbance, but with a natural disaster like an earthquake. There seem to be no grounds for predicting where and when ball lightning will occur, except that obviously it is more common where there are more thunderstorms. The old adage that lightning never strikes twice in the same place is rubbish; high buildings, tall trees and high ground attract more than their share of lightning flashes.

It used to be thought that ball lightning was a very rare phenomenon. However, in one survey carried out on the subject, witnesses who had seen one or more lightning balls, were asked how many times they had seen lightning strike the ground. The two occurrences turn out to be about equally frequent. Now, it is known that in England, for example, there is one lightning ground strike for about every half a square kilometre per year. In other words, in Britain every year there must be something of the order of one hundred thousand occurrences of ball lightning.

What is rare is not the fact of a lightning ball forming, but rather the fact of someone being there to observe it. Some people whose occupations take them out of doors in the right places, such as pilots, have seen the phenomenon many times over. If all these mysterious globes of fire are being formed, some of them must

assuredly be reported as UFOs. Many of them must be hidden away in our files unrecognised. Where are all these UFO reports?

Theories

There have been many theories to explain ball lightning, but only two stand up to examination. One involves chemical combustion, the other a direct current electrical discharge. The first supposes that a very low concentration of an inflammable gas is in the air, when a lightning discharge ignites it: little balls of flame form and dart about. This theory is inelegant, but it has been demonstrated in the laboratory. The second theory supposes that a highly charged thundercloud has not yet reached the point where it can produce the usual lightning flash. If, beneath it, there is a localised patch of air that is electrically different from the rest, then the

electrical lines of force may preferentially pass through there and cause a localised breakdown of the air. A corona discharge may form in this region—something less than a full-scale spark, but rather similar in principle to a Neon sign. Going into the theory in detail and solving the mathematical equations predicts spherical or ellipsoidal shapes, with characteristics very like those actually observed. The beauty of this theory is that it can account satisfactorily for all the well-established properties of the phenomenon, and can probably be modified slightly if necessary.

Understanding of ball lightning has progressed a long way even since Maxwell Cade wrote about it in these pages. It is beginning to become possible to distinguish several different categories of the phenomenon. It would be a triumph if UFO research could contribute something to a further understanding of ball lightning.

THE 1897 STORY Part 3

Jerome Clark and Lucius Farish

ON April 23, 1897, on a farm in Burton township near Flint, Daniel Gray heard a rumbling, whizzing sound over his head. For a few seconds he could see a dark object flashing away, and then, even before he was able to regain his composure, something fell from the sky and thudded into the ground near him. When he picked it up, he found that it was a Toronto, Canada, newspaper dated October 5, 1896, dry and in almost perfect condition.

An airship was observed at Omer on the 24th, and on the same date the South Haven *Sentinel* noted, "So many people have seen the noted airship that has been flitting for the last two weeks back and forth over South Haven, it would take much space to give all their names."

Cigar-shaped objects

Two residents of Freeland, Leonard and Henry Krause, viewed an unknown object on the evening of the 25th. At Sidaw, a resident related his experience of the 26th to the Marquette *Mining Journal*: "I was taking a short walk before retiring for the night. As a rule, I am a person who retires early, but this night I happened to be out late. It was about 11 o'clock.

"I happened to cast my eyes upward, and to my astonishment I saw three large lights, red, green and white. When I first noticed the strange object, it seemed to be over Booth's mill, and was sailing in a south-easterly direction. It was going, perhaps, sixty miles an hour. I was near the Nester estate warehouse at the time, and before I could get anyone else to the site, the ship had disappeared from view.

"It was a bright night and I could plainly discern a cigar-shaped object and a basket below, somewhat resembling a street car. I should judge it was about 2,000 feet from the ground."

Two Dayton people, returning home at 2 a.m. from staying up with a sick neighbour, were startled by the

appearance of a huge cigar with a lighted basket under it. In the light could be seen the forms of three human-looking occupants.

Occupants, music and a grappling hook!

Occupants also figure in a Holton story. On the night of the 29th, at 11.30, a huge lighted object came out of the north and slowed down, finally hovering over the bridge. People streamed out into the street to hear the sounds of revellers aboard the ship. Loud talk and music, "the like of which never was heard in this place," could be heard all during the craft's 55-minute appearance. The phenomenon itself measured 300ft., plus a 40ft. tail; in width and depth, about 90ft.

Just as the tail started to whirl, the beings dropped a grappling hook which caught one of the viewers on the ground. Then the ship flew away. The captured man returned from White Cloud the next day "and has been talking ever since about aerial navigation."

"Mysterious lights have been seen on Long Lake during the past week," the Grand Traverse *Herald* bit enigmatically informed its readers.

And on May 1 the Saginaw *Evening News* related that a shoe of huge proportions, discovered on the railroad track near O'Donnell, Spencer & Co.'s plant, may have fallen from the airship.

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Hints of a whole new dimension to the airship enigma, suggesting that it may have been a world-wide phenomenon rather than solely an American, have been furnished by aviation historian Dale M. Titler. The original manuscript of his *Wings of Mystery* serves as the source for the information which follows.

On July 11, 1897, Swedish aeronaut Salomon Auguste Andree, together with a crew of two, attempted to pilot a balloon from Spitzbergen across the North Pole to a mainland on the other side. In the wake of great public