

The Saguaro Incident: A Study in CUFOS Methodology

An investigation into the case of a nocturnal-light photo provides lessons in how UFO proponents operate.

Lee Roger Taylor, Jr., and Michael R. Dennett

PHILIP KLASS, Robert Sheaffer, James Oberg, and other members of CSICOP have argued persuasively that the study of unidentified flying objects is not a science. Articles in the SKEPTICAL INQUIRER and elsewhere have pointed to flaws in the basic premise of UFO studies. Chief among these flaws is the failure of UFO proponents to use proper scientific methodology—or, for that matter, any methodology at all. UFOlogy has thus established itself as a counterfeit science—or, to use the more common term, pseudoscience.

As a pseudoscience, the study of UFOs can be expected to display a distinctive set of characteristics similar to other less-than-scientific studies like astrology and palmistry. It is characteristic of a pseudoscience—and, indeed, even a mandate—that new cases must continuously be brought forth to cover old, unproven cases in order to justify and renew the “validity” of its faith. In other words, because a pseudoscience’s “evidence” tends to wither over a period of time—largely due to scientific and public scrutiny (not to mention failures in prediction) whether desired or not—faith in the credibility of the “science” must be renewed periodically or else it would simply wither and die.

The committed UFO proponent will thus grasp at any incident or incidents that superficially seem to support his belief irrespective of potentially contradictory past statements. More often than not, these “new”

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cases are (1) not really new at all (that is, characteristically different from any case heretofore identified), and (2) fraught with scientific and logical errors.

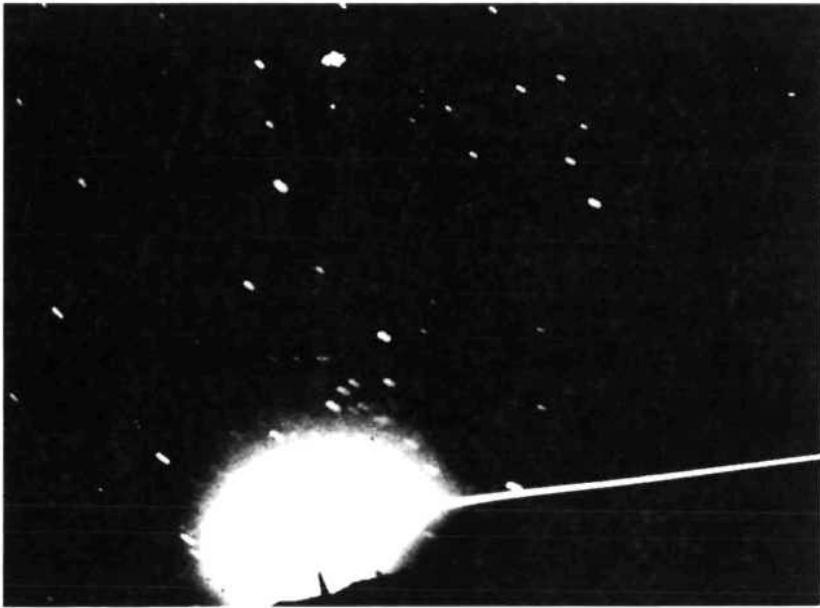
Real science is characterized by the discovery and analysis of new data. These two concepts are integral and inseparable if progress is to be made. The scientific method demands careful checking and rechecking. It is hardly likely that, when an astronomer discovers an object on a photographic plate, his first step in analysis would be to proclaim what he "thinks" it might be and then argue from that basis contrary to all evidence that might follow. More likely, the astronomer will have a good guess as to the identity of his new-found object, but his first step is to confirm the fact that he has indeed made a discovery at all, which then must be reconfirmed by other astronomers. This process eliminates the possibility of naming dust specks and photographic-plate flaws after eminent astronomers.

Pseudoscience, on the other hand, tends to announce its discoveries without going through the process of analysis. In some instances, such as in UFOlogy, evidence may have been collected. The problem, however, has been either a faulty or incomplete collection of the evidence or an incomplete analysis of any or all of the evidence. Indeed, more frequently than not, the latter is true: Those pieces that seem to substantiate a predetermined hypothesis are used to justify it, while the remainder is consigned to File 13.

We became interested in these particular characteristics of UFOlogical investigations while unbeknownst to each other we pursued separate paths to a singular event that we have called "The Saguaro Incident." When our paths finally crossed, we were able to compare notes not only on our discoveries but also on the apparent "laws" that govern the formulation and the ultimate promulgation of an "incident" as a mysterious "unknown."

The Saguaro Incident contains nothing of momentous study. In fact, it was a rather unremarkable occurrence: a simple nocturnal light. This light was seen and photographed west of Tucson, Arizona, in March 1977. Its "discovery" was first published in the Center for UFO Studies (CUFOS) *Associate Newsletter* in May 1980 ("1977 Nocturnal Light Photograph Reported").

The essential facts as detailed by CUFOS are as follows. In mid-March 1977 between 10 and 12 P.M., James Ferguson and Tom Patton were two miles west of Tucson taking photographs of saguaro cacti, using flash-lighting effects, when the "floor of the desert around them suddenly began to brighten as if by a full moon." The two men turned and saw a mass of light that hovered for "many minutes just above the horizon and did not appear to move." As Ferguson and Patton viewed this sight—which CUFOS termed "amazing"—they turned their 35-mm camera around and produced the accompanying time exposure (Photo 1). CUFOS



PHOTOGRAPH 1: The Saguaro Incident photo.

explained that the time exposure lasted for "several minutes," as could be verified by the light paths of the stars. While the time exposure was in progress, the object moved "very rapidly to the North and disappeared." Readers were advised that the case was under investigation by the Center. The results were to be published in a future newsletter. To our knowledge, no subsequent information about this incident has been published by CUFOS.

As our separate investigations merged, the evident flaws in the CUFOS research became more pronounced and were indeed aggravated by their subsequent handling of the case.

Initially, one of us (Dennett) was immediately struck by a basic similarity between the Tucson photograph/description and another photograph/description in a recently published book. The other photo was taken in 1923 by Josef Klepesta while he and another astronomer, Zdenek Kopal, were making a time exposure of the Andromeda galaxy. Dr. Kopal later described the 1923 fireball as "many times brighter than the full moon and for a few seconds of its flight converted night into day." So impressive was this observation that Dr. Kopal could still remember it distinctly even though it occurred six decades ago. To Dennett, the Tucson description seemed almost identical.

A copy of the 1923 photograph and the written description were sent to CUFOS. The similarities between the two events were not viewed as significant by the Center. The idea that the Tucson photograph was or

could be a fireball or bolide meteor was rejected on the grounds that it would have been observed and recorded by the American Meteor Society.

Although the meteor explanation was not without its faults, the reasons given by the Center were invalid. Karl Simmons, the editor of *Meteor News* (the publication of the American Meteor Society), disagreed with CUFOS. Simmons stated that the absence of a report of a bolide was not evidence against the theory. Sporadic bolides (i.e., those not associated with any known meteor shower) occur with a fair frequency. The duration of these ephemeral objects may last from half a second to as long as five seconds. The probability that any two people in separate locations will be watching that segment of the sky (when no meteors are expected) at the instant of the occurrence is very low. As a matter of fact, Taylor had had a similar experience in 1971 in which he was the sole reporter of a bolide with an estimated magnitude of -16. Later, when Simmons received a copy of the photo, he identified it as an "exploding fireball, with a nice terminal burst." Of more importance to CUFOS, and their second argument against the bolide explanation, was its incongruity in every detail with the witness testimony. CUFOS assured Dennett that there was *nothing* to indicate flaws in the accounts of the two witnesses. The fact that Ferguson was a skilled photographer and capable of hoaxing a photograph was acknowledged by CUFOS's John Timmerman. Timmerman emphasized, however, that *no information had been presented to indicate a hoax*. He noted that the Center was continuing its investigation and that additional information would be published in the *Newsletter*. The case then stood as unexplained and rested, as far as the Center was concerned, on the credibility of the witnesses.

CUFOS did not reveal to Dennett, however, that Taylor was working with the Center on the very same case but presenting an alternative explanation and evidence that did in fact contradict the testimony of the witnesses. Taylor had first considered the possibility that the photograph might be a bolide but rejected it for four reasons: (1) Careful examination of the initial "beginning" of the light streak at the edge of the light "burst" reveals a slight curve. While meteors do sometimes move in erratic paths, an erratic path would characterize much of the light streak, or, at the very least, be preceded by a burst that would then cause the meteor to move erratically. (2) The light burst itself is nicely tapered in the direction of the path, which would be more indicative of a directional bright light that was slowly turned away from the viewer's line of sight. (3) The elapsed time for even a slow bolide of this nature would not have allowed enough reaction time to turn their camera in its direction. (4) It was highly coincidental that a terminal burst, or other light source, for that matter, should be so perfectly aligned with a tall, pointed object resting on a hill. This immediately raised serious suspicions of a hoax.

Taylor's initial impression, on the other hand, was that the object

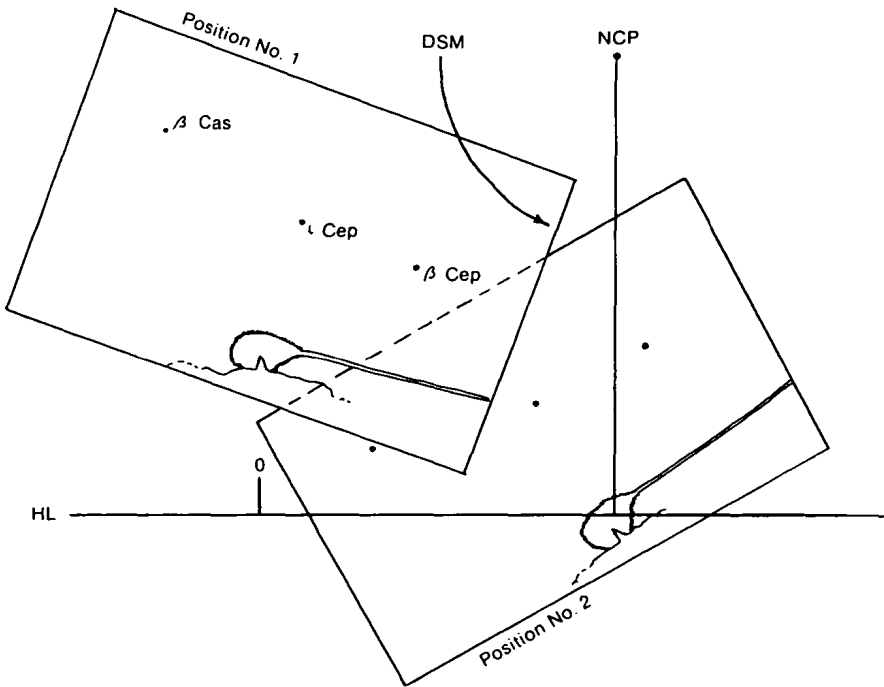


FIGURE 1: A comparison of relative star positions for two different times. The comparison indicates that the dark object in the light burst is perpendicular to the horizon. Position No. 1 represents the position of the stars with respect to the NCP (North Celestial Pole) and the assumed HL (Horizon Line) for mid-March at 8:00 P.M. Position No. 2 represents the position of the stars as they would appear for mid-March at approximately 11:00 P.M. If Position No. 2 is the correct time, the object would have first "appeared" *below* the horizon and flown high to the east. DSM—Direction of Stellar Movement (apparent)

may have been an aircraft with directional lights (such as landing lights) that was approaching the observers' position from the north and then turned to the east—which, in effect, would have caused the bright lights to nearly disappear and could have resulted in the thinly diminishing light streak.

This curiosity led to a more careful examination of the stellar background of the photograph, which in turn led to the conclusion that the photograph could not have been taken at the time the witnesses claimed it was. Four stars are easily identifiable in the photograph: Beta Cassiopeia and Alpha, Beta, and Iota Cephei. (See Figure 1.) The position of these stars in the sky is of little use without an identifiable horizon line. The camera is obviously askew with respect to the horizon, giving credence to the witnesses' statement that they hurriedly pointed the camera in the direction of the object. Centered in the light burst is what appears to be a large, narrow object. Since the witnesses had stated that they were photographing saguaro cacti (one portion of the Saguaro National Forest/Park

is located a few miles west of Tucson), Taylor made the inference that this object was just such a cactus, which like most of its species grows perpendicular to the earth. The only other possible explanation is that the object is a very large, narrow rock outcropping, which would have been highly unusual given the terrain. On the assumption that the object was a saguaro cactus and that the altitude of the North Celestial Pole at Tucson is 32.5° , an estimated horizon line can then be drawn. Placing the North Celestial Pole on the sketch is then a simple matter by matching the scale in degrees to the photograph. Having done so, it is then possible to calculate the approximate time. If the inferred horizon is correct, then the photograph had to have been taken at 8:00 P.M. for mid-March. By shifting the photograph to the 11:00 P.M. position (the estimated time of the photograph), Beta Cephei should at that time have crossed the meridian (an imaginary line drawn from the northernmost horizon point, through the North Celestial Pole, through the zenith, and then to the south). This position would then place Beta Cassiopeia very close to the horizon and probably hidden behind the mountains and hills in that region. In addition, this time-frame would place the photographed object below the horizon relative to the star positions for that time.

In other words, it would have been impossible for Ferguson and Patton to have seen the object at the time they "think" they saw it. Also, if 11:00 P.M. were the correct time of the photograph, the discernible nearby hill/bluff on which the cactus is situated would have to be tilted (along with the slender object) at a precarious angle. This in itself would not be unusual; however, the direction of the UFO's movement would have been clearly to the east and thus visible for a considerably longer time. According to Ferguson and Patton, the UFO "moved rapidly to the north and disappeared." If the photograph had been taken at 11:00 P.M., the object was already in the north and would have thus disappeared to the east. If, however, the photograph had been taken three hours earlier, at 8:00 P.M., according to a computer simulation the object would have had an azimuth of 348° and could have easily moved to the north.

It is perhaps understandable that the witnesses might make an error in their time estimate, but a three-hour error is highly unlikely. The remaining probability of error is that the photograph was not taken in mid-March at all but rather mid-April. This in itself raises serious questions about the credibility of the witnesses. It would imply that they could not remember what month it was taken, which in turn implies that they gave the photograph little or no attention for an unknown period of time before notifying CUFOS. This creates a situation fraught with "scientific" error: a photograph in which the time and date are unknown. There is some credibility associated with this hypothesis, since the photograph was taken in 1977 but CUFOS failed to publish it until 1980. The date that Ferguson reported the incident has not been released to us. The tentative

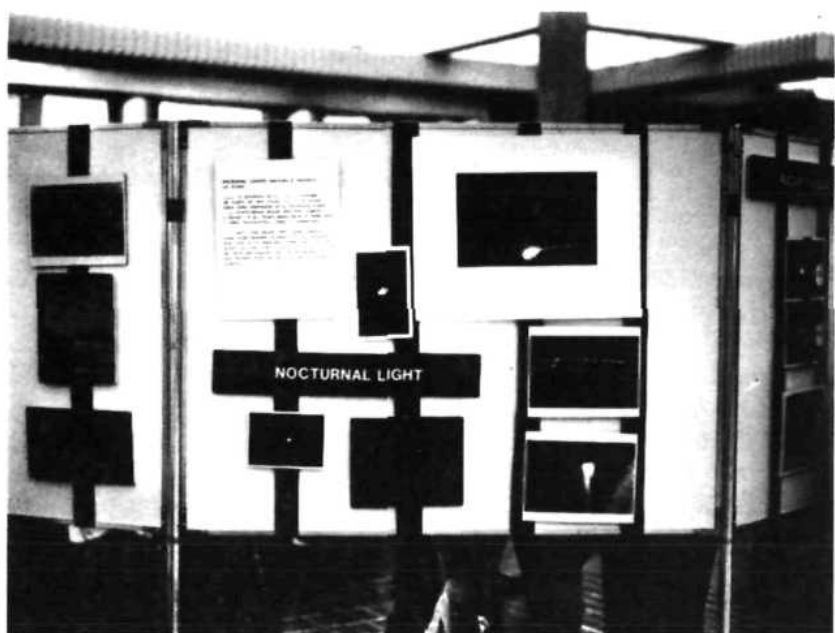


Photo by Michael R. Dennett

PHOTOGRAPH 2: A photo of the nocturnal light section of the CUFOS traveling photo exhibit. Note: Saguaro Incident Photo is the most prominently displayed of the "nocturnal light" photos.



Photo by Michael R. Dennett

PHOTOGRAPH 3: Identification section of the CUFOS Photographic Exhibit with picture of J. Allen Hynek, Ph.D.

conclusion thus drawn is that somebody (whether Ferguson or CUFOS) did nothing with a photograph of a supposedly “other worldly” object for a very long time.

This body of evidence was presented to CUFOS independent of Dennett’s, and we were given two quite different and independent responses. Communication continued with Dennett as he pursued his efforts to obtain more detailed information. After an extremely brief correspondence, CUFOS ceased all correspondence with Taylor, ignoring all further requests for information. In February 1981, before this brief spate of correspondence concluded (or was halted), Taylor received a personal letter from J. Allen Hynek. It congratulated Taylor on “a nice bit of astronomical detective work” and then went on to say that it threw considerable doubt on this case and that he did not take nocturnal light cases too seriously because of the lack of scientific leverage (Hynek 1981). During this period, Dennett was not informed that the credibility of the witnesses had been thrown into doubt.

It was not until some time after the initial investigation that Dennett discovered the work of Taylor. By then Dennett had become dissatisfied with the bolide theory because persistent investigation still had not turned up a single confirmation of a visible bolide in the Tucson area for March 1977. With the discovery of Taylor’s data, the idea that the photograph was a hoax or an aircraft’s landing lights became more plausible. Further investigation by both authors—now working in conjunction—revealed that CUFOS had made taped interviews with both witnesses but had never offered them for scrutiny. At one point Taylor was offered a transcript, but when he requested it CUFOS ignored all of his further correspondence. Both authors assumed that, given the discrepancies already discovered, this data was being withheld in the fear that further discrepancies might be found.

Nonetheless we persevered in the attempt to obtain more information. Dennett, by-passing CUFOS altogether, corresponded directly with Ferguson and Patton. In one letter, Patton claimed that the UFO remained in the sky for 20 to 40 minutes and stated that the object took off in a northwesterly direction. This is totally contradicted by the photographic “evidence.” If this statement were true, then they would have to have photographed the object as it approached and then hovered—without making any effort to photograph it as it left. In other words, the object moved in a direction opposite to what is obvious in the photograph. In addition, the approaching object would have given off little more light than a star of magnitude -1—certainly not enough to light up the floor of the desert. Patton further indicated that the initial description of the amount of light produced by the object, as reported in the *Newsletter*, was accurate. Taylor, in re-examining the photograph in the light (so to speak) of Patton’s final statement, tends to agree. The light required for that

amount of illumination would probably have made Iota Cephei invisible in a two-minute time-exposure. This, however, simply added another contradiction to an already heavily compromised testimony.

In a letter to John Timmerman in June 1981, Ferguson acknowledged the possibility of error in time: "The original time I gave was an estimate since neither of us looked at our watches. I ["We" deleted] had been photographing for sometime in the dark before the sighting occurred. Having just spent one month camping . . . I realized that our time could be off because one switches time when camping. . . . When you rise with the sun, you go to bed earlier. That makes bedtime seem later because I normally go to bed between 11:00 P.M. and 12:00 A.M. That could make 8:00 seem like 10:00 or 12:00."

Ferguson's explanation appears quite reasonable if one assumes that, having seen and recognized an unknown event that he acknowledges frightened them, there would be no need to look at a watch—even though Ferguson implies that one was available. His re-evaluation of his story is, however, less credible in light of the fact that twilight (the final diminishing glow as the sun fades completely) ended at approximately 7:30 in mid-March. Thus the two had been photographing for only about a half-hour in the dark. The implication is that the work of the two witnesses was so boring that a half-hour's work seemed like three hours.

In addition, after conferring with Patton "several years after the event," Ferguson agreed that "the object stayed there for sometime, what I think was about 20-30 minutes *before the picture was taken*. . . . *It wasn't until the end that I remembered the camera and took the picture*" (emphasis added). Thus, two men who had been photographing cacti stood around and watched what they thought was a craft from another world for about half an hour without giving a single thought to the camera loaded with film and ready to operate just a few feet away from them.

Finally, the photograph was allegedly taken just two miles west of Tucson, a metropolitan area with a 1980 population of 531,263; yet the object stayed in the sky for an alleged 20 to 40 minutes and was unobserved by anyone other than these two men. While it is possible that a fireball meteor in the late evening would and could have gone unseen, it seems improbable that a strange, glowing craft could have hovered for twenty minutes or more just outside a major metropolis without being seen by many people. Unless, of course, it only appeared as a hovering ball of light from one vantage point alone, while at any other vantage point it appeared as a known or recognizable object.

It would seem that CUFOS should have revealed the evidence against the authenticity of this photo to its readers. That the Center for UFO Studies ignored the work of two skeptics demonstrates an unwillingness to present material contrary to their preconceived idea of what UFOs are. Indeed, the CUFOS policy seems to imply a strenuous effort to inundate

CUFOS

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**ASSOCIATE
NEWSLETTER****Volume One, Number One**

You are reading the first issue of a new monthly publication by the Center for UFO Studies. The ASSOCIATE NEWSLETTER comes into being to broaden the range of information already available from CUFOS to those who are interested in keeping up-to-date on activities of the Center and news of UFO sightings and investigation not usually available elsewhere. If you are now or will become an ASSOCIATE of CUFOS (as described in the enclosed application form), you will begin receiving this new NEWSLETTER. It will be mailed monthly to ASSOCIATES of all "kinds," but will not be available by sale or by subscription.

This issue is being mass-distributed to potential ASSOCIATES to explain the Center and to attract new financial support for UFO information and research. We will be very grateful if, after reading this copy, you will pass it on to a friend near you or in a distant city who may wish to be involved in this very interesting work. Thank you for doing that for us.

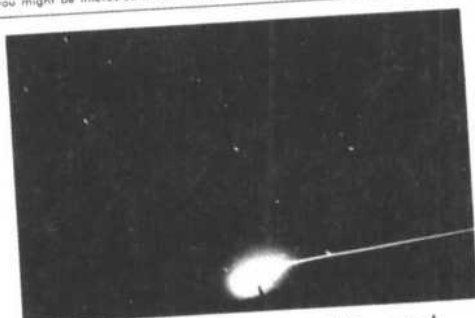
It is our hope that the ASSOCIATE NEWSLETTER will grow in usefulness to those who read it and in this and future issues we plan the following articles. Dr. J. Allen Hynek, Scientific Director of CUFOS, will write a regular monthly item. Allan Hendry, our Chief Investigator and Managing Editor of the INTERNATIONAL UFO REPORTER, will report on recently investigated sighting reports not appearing in the IUR. Mimi Hynek, Vice-President for Publications, will report on new and popular items available from the Center Information Services Department. Fred Merritt and other officers and ASSOCIATES will contribute articles about UFOCAT, physical trace cases, sightings from aircraft, interesting visitors to the Center offices and a variety of other matters relating to UFOs. We will

reserve space for the "photograph of the month" with commentary about it. You will be invited to send us your comments for possible publication as an ASSOCIATE CORRESPONDENT.

Besides the above, we hope to make announcements about conferences of UFO organizations which you might be interested in attending.

We will publish the scheduled appearances of CUFOS ASSOCIATE speakers throughout the country, including Dr. Hynek's activities which you or a nearby friend might attend. In short, we will attempt to bring to you, through this publication, information which you might like to have, but don't have time to seek elsewhere. As an ASSOCIATE of CUFOS, we want you to stay informed and up-to-date. Welcome to CUFOS.

John P. Zimmerman

**1977 Nocturnal Light Photograph Reported**

Between 10 and 12 PM in mid-March 1977 James Ferguson and Tom Parson were about two miles West of Tucson, Arizona in the desert preparing to take night photographs of saguaro cacti using flash-lighting effects. As they had their camera on a tripod and ready to take a photo of a large cactus, the floor of the desert around them suddenly began to brighten as if by a full moon. The shadows made them turn around just in time to see a large mass of light arise from behind a distant range of hills. This amazing sight stunned them at first and they waited for it to move higher in the sky. Instead, the mass of light hovered for many minutes just above the horizon and did not appear to move. The two photographers (Ferguson has an MA in Photography) quickly turned their camera on tripod toward the degree in Photography) quickly turned their camera on tripod toward the light, set the aperture at f11.2, set it for a time exposure and opened the shutter. Several minutes passed which can be determined by measuring the lens. The trail of light in this picture and suddenly the light source moved paths of the stars visible in this picture and disappeared as a point of light in the distance very rapidly to the North and disappeared as a point of light in the distance. The trail of light on the picture indicates the path of departure. The negative of this photograph and the sighting are under investigation by the Center. The results will be published in a future NEWSLETTER.

The May 1980 CUFOS Associate Newsletter, reporting the Tucson "nocturnal light" photo.

its membership with as much unchecked, unverified, insubstantial, and incredible information as possible. Then, by tagging most incidents with "under investigation" or "investigation is continuing," the membership is convinced that the organization is carrying out diligent and exhaustive "scientific" investigations. In reality, the probability is very strong that many go uninvestigated, unverified, and unanalyzed. And, without follow-up revelations provided by either skeptics or investigators, the membership is likewise convinced that the evidence for UFOs (i.e., flying saucers, of course) is overwhelming, incontrovertible, and ever expanding.

Quite frankly, CUFOS reacted much as we expected it would. What neither of us anticipated was that the photograph was far from retirement six years after the event. This photograph, which had nothing identifiable in it, except a streaked star-field, and belonged to a class that J. Allen Hynek did not take seriously, suddenly reappeared in the November/December 1982 *International UFO Reporter*. It was one of four featured on the back cover. The photograph, however, was not part of a series of revelations of hoaxes or other exposed or prosaic events. Rather, it was part of the Center's "1982 Holiday Special." The advertisement read as follows: "Four Never-Before-Available Full Color Photographs of Unidentified Flying Objects, from the case files at the Center for UFO Studies, which remain unidentified, together with an explanatory article regarding each case involved, reprinted from back-issues of the CUFOS Associated Newsletter." It went on to say that they were 8 × 10 color prints, ready for mounting, showing "very interesting detail."

Neither of the authors had had an opportunity to examine a print of any size larger than a small postcard, because Ferguson had loaned the original negative to CUFOS and it had apparently not been returned. Thus Dennett could not resist obtaining an 8 × 10 copy—particularly one in full color, since the original was black and white. Not surprisingly, when it arrived it was simply a black and white glossy and certainly lacked any "interesting detail" that would have justified the \$8.50 price. The information that accompanied the print was merely a reprint of the original *Associate Newsletter* description, completely unexpurgated of the errors and contradictions we had pointed out. No attempt by the Center was made to present any additional information or correct the major mistakes in the original report.

This merchandising of an unscientific, or at best questionable, photograph is an example of the manipulation of the credulity of the organization's membership. The photograph had ceased to be a point of investigation. Rather, it had become an object in a Barnum and Bailey three-ring circus and thus capable of generating money. Its value apparently was no longer scientific, just pecuniary. Both of us were reminded of Chaucer's "Pardoner" in *The Canterbury Tales*, who sold falsified Papal Bulls and relics and said:

And I speak in few words
To add spice to my preaching,
And to stir them to devotion.
Then I show them my crystal jars
Crammed full of rags and bones—
Relics they are, *as they each suppose*.

It was clear that so-called UFO studies failed a particularly important

aspect of science: avoidance of methodological errors. Skeptics have identified many errors in the methodology of “believers.” These flaws have been consistently brought to the attention of UFOlogists but have been just as consistently ignored. Among the most prevalent errors in methodology among UFOlogists are the following:

1. Acceptance of data obtained under questionable circumstances.
2. Failure to fully or properly investigate the event.
3. Withholding of scientific information/evidence from public scrutiny.
4. Ignoring information/evidence provided by skeptics.
5. A propensity to make bold claims that later cannot be supported.
6. Introduction of extraneous data or arguments.
7. Exploitation of an event for monetary or publicity reasons.

Errors of each of these types were identified by the authors as they became drawn into this unremarkable incident. In fact, our chagrin turned to amusement—partly out of frustration—because it is the nature of science to formulate “laws” on the basis of repeated observation. The “observations” above have been repeatedly made by prior skeptics. The authors, in the accidental, if not random, selection of a single event, observed all of these observations to be true. Therefore, it would not be untoward of either of them to call them “laws,” or, more properly, “The Seven UFOlogical Laws of Belief.”

While we were finishing this article, the CUFOS traveling photographic exhibit (*SI*, Spring 1984, p. 209) arrived in Seattle, and Dennett was able to view it. The Saguaro Incident photograph was the featured photo for the section marked “Nocturnal Light.” A short description of the photo paraphrased the original description in the May 1980 *Associate Newsletter*. The prominent use of this photograph without any qualifications for a public display confirmed again what we have already stated concerning the methodology of UFO promoters in general and CUFOS in particular. ●