

Pursuit[®]

'Science is the Pursuit of the Unexplained'



BURNED into tall grass and the ground beneath, a huge circle with the letter *H* precisely centered inside was found in 1971 in a meadow near Mulhouse, France, following a rumored UFO sighting.

SEE "THE SEARCH FOR ANCIENT AQUANAUTS," PAGE 57.

Journal of SITU
The
Society for the
Investigation of
The Unexplained

Volume 15
Number 2
Whole 58
Second Quarter
1982

THE SOCIETY FOR THE INVESTIGATION OF THE UNEXPLAINED

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SITU exists for the purpose of collecting data on unexplaineds, promoting proper investigation of individual reports and general subjects, and reporting significant data to its members. The Society studies unexplained events and "things" of a tangible nature that orthodox science, for one reason or another, does not or will not study.

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The Society's journal *Pursuit* is published quarterly. In each year the issues are numbered respectively from 1 through 4 and constitute a volume, Volume 1 being for 1968 and before, Volume 2 for 1969, and so on. Reduced-rate subscriptions to *Pursuit*, without membership benefits, are available to public libraries and the libraries of colleges and universities at \$10 for the calendar year.

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THE QUARTERLY
JOURNAL OF THE

SOCIETY FOR THE
INVESTIGATION OF
THE
UNEXPLAINED

Pursuit

'SCIENCE IS THE PURSUIT OF THE UNEXPLAINED'

Contents

	Page
Morag of Morar by Sydney Wignall	50
Enigmagrams by George W. Earley, Kim L. Neidigh	52
Ancient Space Flight: Search for Evidence by Stuart W. Greenwood.....	53
The Search for Ancient Aquanauts by Harry Lebelson	57
Causality and Synchronicity as Natural Principles by Delwin D. Cahoon	62
ESPionage: Have 'Mind Control' Techniques Supplanted the Cloak and Dagger? by E. Macer-Story	64
Parapsychology in China.....	67
The Origins of Lemuria (Part II) by Jon Douglas Singer.....	68
SITUations: "Abominable Flowman"—Grandma Power —Mummy's Dirty Lungs—Bigfoot Breakthrough—Continental Crackup—Big Cats Still Surviving?—Baby's Evolutionary Tail	71
Proposed Data Base for Unorthodox Energy Science by Thomas E. Bearden.....	75
Books	78
Symposium: John White Answers His Critics with a Pole Shift Update.....	84
Letters.....	86
The Notes of Charles Fort Deciphered by Carl J. Pabst	94

Cover photograph courtesy of Harry Lebelson

In the curt jargon of industrial classification, *Pursuit* is a "no ad" publication, and in narrow sense, the designation is correct: Leaf through all 58 issues of *Pursuit* since we started publishing in 1967 and you'll find nary a single page that even looks like an advertisement.

But wait a minute. Does that mean that *Pursuit* doesn't contain advertising? No indeed.

What you find in this issue and in every issue is page after page of advertising that's as truth-seeking as any you'll ever encounter—ads not for the sale of goods or the use of services, but rather to promote the spread of ideas about anomalies, their perception, consideration and discussion.

To say as much makes no claim that what we do is in any way "more worthy" than the megalithic marketing effort that goes on hourly across the TV tube or daily in the pages of newspapers and magazines. In microcosm we use the same devices—words, pictures, distribution—to focus thought, but it is that special kind of thought we proudly call Fortean.

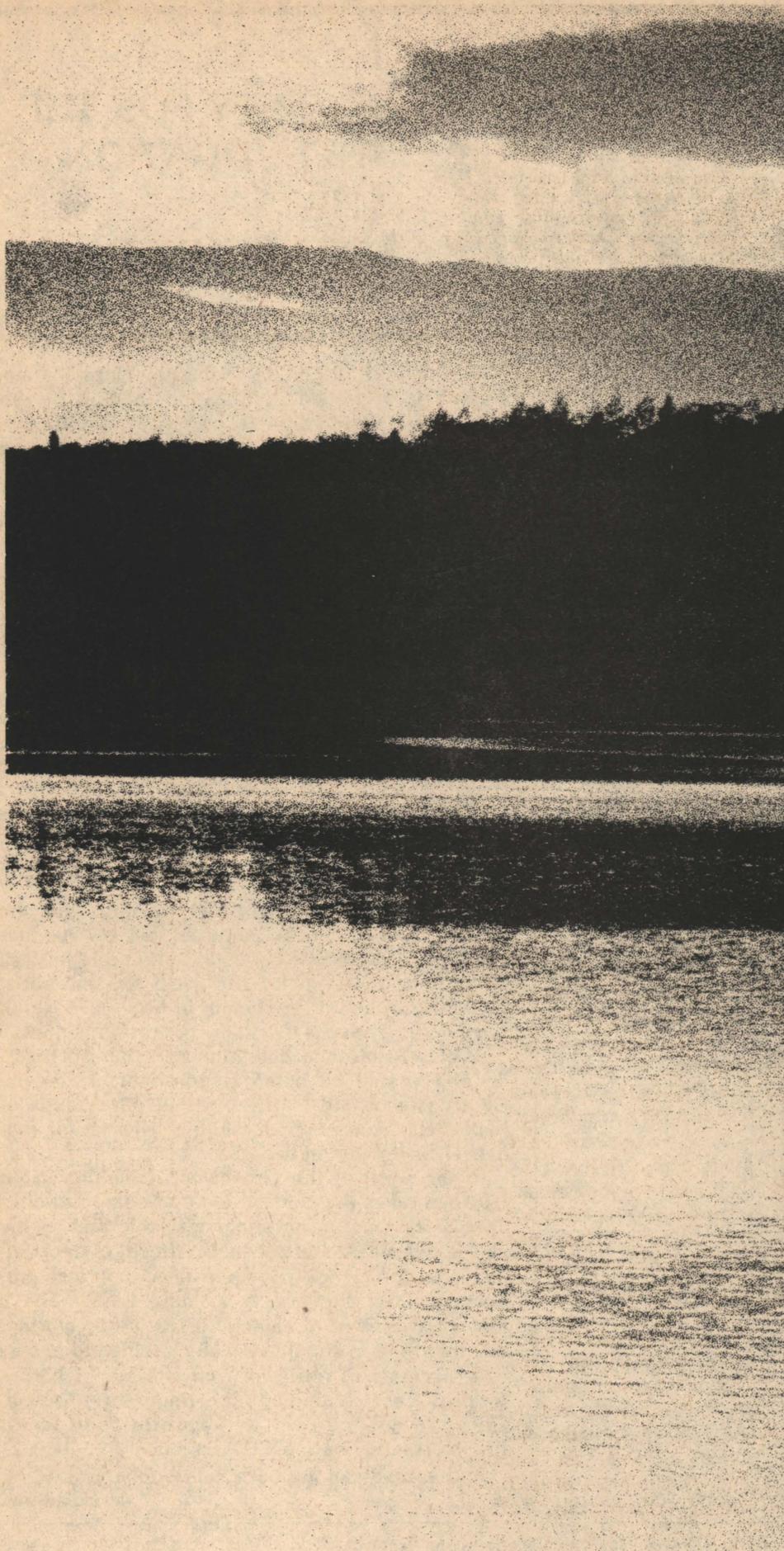
The letters you write to SITU, the newsclips you send in, and the books you read and review offer proof of an insatiable curiosity, admirable in itself but all the more so for the great joy and satisfaction that is to be found in the exercise of reason and from the discipline of fair-mindedness.

A better-seasoned definition of what we try to do and should be doing is admirably stated by Stuart Greenwood in the opening paragraphs of his article "Ancient Space Flight: Search for Evidence" beginning on page 53.

In the spirit of the Greenwood definition, Tom Bearden takes the confusion out of computer chit-chat as he sets up an understandable and highly useful system for storage and retrieval of unorthodox energy science. Readers need not feel put-down by his reference to a "data base." That's just another way of saying "if it's worth storing, any information should be well-classified to enable easy access and retrieval from storage," whether in neat card-cataloging directing you to book-stacks in a library, or by keywords that access the information onto a CRT screen.

In the middle of it all are SITUations. Enjoy!

—The editors



My interest in loch phenomena had burgeoned since the famed "Doc" Edgerton had joined my expedition to Porto Bello, Panama, in 1975 when he showed me strobe-lit photographs of what appeared to be a diamond shaped fin or tail, taken in Loch Ness. I had for some time been working on my own hypothesis as to why and when the loch creatures either surface or swim just subsurface:

The monsters are not confined to Loch Ness, and there are colonies of them, perhaps 75 to 100 pairs in Loch Ness, and 20 to 25 pairs in other Scottish lochs.

I believe they are descendants of either the zeuglodon or the plesiosaur, that they mate and give birth in the top 40 to 50 feet of water, and that they break surface unintentionally.

We were agreeably surprised with the underwater visibility in Loch Morar when we saw, from a depth of 30 meters, our inflatable boat on the surface. I was even more surprised when an animated creature with two black wet glistening humps surfaced about 100 meters behind our boat as we were returning to the village of Morar at 3:30 p.m. on March 3.

Woodward saw the creature first, as it broke surface. By the time I had turned round to view it, the monster had settled in the water just to starboard of our stern and was proceeding on the same course as ourselves but at a slightly slower speed (we were doing about five knots).

There were two humps, the first of which was about four feet in length by a foot high, and triangular in shape. The rear hump was considerably smaller and was separated from the front hump by about four feet of water. The front hump made a slight

wake and our wake was washing against it. After only a matter of seconds the creature submerged without any disturbance of the loch surface before our photographer, John Evans, was able to get a camera out of his bag.

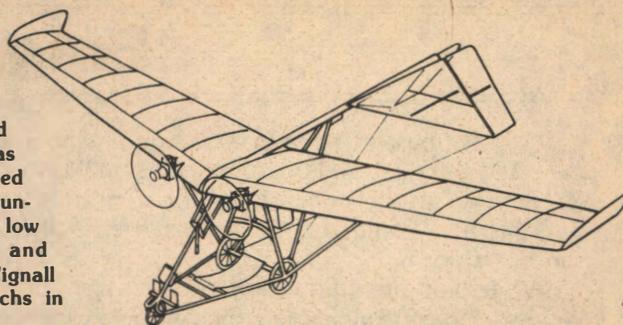
That sighting completely changed my life. I had been planning an expedition to search for a shipwreck of historical interest 800 miles north of the Arctic circle. All thoughts of underwater archaeology went out of the porthole and I decided there and then to devote what years I had left to a quest to identify and record on film a creature hitherto believed to have been extinct for 65,000,000 years.

Why should I, a newcomer to the field of "monster spotting", believe that I could have any better chance of success than those who had been seeking "Nessie" for more than 25 years? The difference was that my first sighting fitted perfectly into my hypothesis. The luck element was also there, for the chances of the creature surfacing close to our boat instead of, say, eight miles away at the other end of the loch must have been several million to one.

The combination of what might be a working hypothesis and the remarkable underwater visibility in Loch Morar suggested to me that the place to be was not in a boat, on the side of the loch, or swimming around underwater. No, the best place of all would be up in the air, flying, whenever my theory hinted that the creatures would be swimming just subsurface. Kitted up, I could land on the water and jump in for the eyeball-to-eyeball cine and still photography necessary to identify and record a possible surviving dinosaur.

The ideal instrument would be a helicopter, but with hire charges up to 200 pounds an hour, such a platform was out of my reach. The best bet would be the new breed of light aircraft called microlites but fitted with floats.

Syd Wignall fitted floats to a standard microlite airplane (right), then learned to fly it. The tiny craft was incapable of lifting a suited diver along with his heavy underwater camera; yet its low speed, maneuverability and fuel efficiency enabled Wignall to search the Scottish lochs in a truly "new age" way.



American Aerolites, Inc.

Then came more problems. The drag of the floats was such that the plane could not lift a pilot clad in diving gear and loaded with cameras. We had to use the microlites for reconnaissance only. My plans for dropping into the water would have to be postponed until 1982. Surface observations both in the daytime and at night (the latter from land using infra-red NATO nightsight telescope) revealed a number of wakes without boats at their heads. Scuba diving in Loch Morar confirmed that a submerged diver could be seen from the air when he was 4-to-5 meters beneath the surface.

I found that encouraging, bearing in mind that an air to surface sighting of a completely submerged loch creature might produce acceptable photographic results.

We found the task of dismantling the aircraft every night (to avoid damage due to storms) and re-rigging in the mornings a pain in the neck, so observation of six further lochs, Ness, Oich, Lochy, Quoich, Shiel and Arkaig waited until Gerry Breen arrived in his conventional aircraft, an Aerospatiale Rallye 110. Meanwhile we flew and observed and dived. Due to torrential rain, the underwater visibility in Loch Morar deteriorated until it reached a still acceptable 12-to-13 meters.

One sunny day, while expedition member "Chip" Smith and I were sorting out gear, we saw two wakes moving to the East in mid-loch. Observation with binoculars showed an occasional hump at the head of each wake, but only momentarily. A cine and

still record was taken but it showed only the wakes and, as the range was about three-quarters of a mile, would not be acceptable to science.

Breen flew up from Oxford to Skye where I met him, and from then on we took off every morning when the (appalling September) weather permitted, and flew over to the mainland and covered all of the seven "monster" lochs of my itinerary.

Famous Loch Ness I quickly discounted, for there were too many red herrings. Flying at 1500 feet (best altitude for observation) we would espy a possible "Nessie" and drop down to 200 feet only to confirm a floating, partially filled "bin bag." There were dinghies, canoes, pleasure boats and MFVs.

Oiche and Lochy were similar, so I switched to Morar, Arkaig, Shiel and Quoich. Arkaig and Quoich are eerie and fascinating, with apparently clear water. Apart from one dinghy carrying anglers on Arkaig, both lochs were deserted. Sheil proved to be a pig of a loch. We never did overfly the Northern end due to excessive wind turbulence, which at times scared me to death: I thought in my ignorance that the wings were going to be pulled off.

Meanwhile, Chip Smith saw a loch creature at a range of about a mile, from dry land. He watched a single dark hump for about ten minutes, after which it sank straight down. One aerially observed wake looked like a running torpedo. It ran for about a thousand yards, with no boat at

(Continued on page 56)

Enigmagrams

BECAUSE most of its vast collection is stored away, and only 3% of its estimated 78 million objects on display at any one time, the Smithsonian Institution in Washington, D.C. has been called "the nation's attic."

While not admitting they've ever lost anything, Smithsonian officials recently began the most complete inventory in the museum's history. By next year they hope to have a computerized record that will tell exactly what they have, what its condition is, and where in the 12-building complex it is to be found. There's little doubt that the cellar-to-attic, building-to-building inventory will turn up objects long forgotten by veteran Smithsonian workers, and relics whose labels have come off during years of being shuttled from one dusty back room to another.

Cryptozoologists will be watching the search, too, hoping it will turn up a glass container "about the size of a milk can" in which the only remaining tissue samples from a mystery monster cast up on the Florida coast nearly 90 years ago were last seen.

Sent to the Smithsonian in 1897 by Dr. DeWitt Webb, a Florida physician with a keen interest in natural history, the tissue samples languished unexamined until 1962 when Dr. Joseph F. Gennaro, Jr. persuaded Smithsonian officials to let him take a few pieces for study. Gennaro's examination showed conclusively that the tissue was neither that of a giant squid nor of a whale. Prof. Addison Verrill of Yale identified the creature as a whale on the basis of tissue samples he received from the Smithsonian, but he never examined the corpse as Webb had done.

Dr. Gennaro opted for a different identification: Writing in the March 1971 issue of *Natural History* magazine, he insisted "The evidence appears unmistakable that the St. Augustine sea monster was in

fact an octopus . . ." Accepting Webb's on-site measurements, he estimated the monster would have spanned nearly 200 feet, tentacle-tip to tentacle-tip, large enough to overturn most sailing ships of the type used during the 15th and 16th centuries when reports of such destruction by sea monsters were legion.

An octopus that large would dwarf the giant squid *Architeuthis*, a monster that attained lengths up to 75 feet and whose existence had been established some years earlier by the same Prof. Verrill who refused to accept Webb's specimens as coming from a giant octopus. Verrill had initially accepted the creature as a giant octopus; he named it *Octopus giganteus* but later withdrew the identification and substituted the whale identity to which he clung thereafter.

Despite Verrill's disavowal, the Smithsonian's tissue container was labeled *Octopus giganteus* Verrill, said Dr. Gennaro. Even so, the existence of the giant octopus has still not been accepted by the scientific community. Additional tests might speed acceptance, but Gennaro isn't too hopeful. "The Smithsonian jar was lost during a move," he noted in his article. "The samples I had taken are all that's left . . ."

"I don't think (the jar) is really lost," Dr. George Zug, chairman of the Smithsonian's Department of Vertebrate Zoology told me some weeks before the official announcement of the \$7 million inventory project. "It's just misplaced; someday it'll turn up."

Unanswered is the question of having the mystery tissue re-examined when it does turn up. If further examination discloses that the tissue is from an octopus, its name should be changed to *Octopus giganteus* Webb. —George W. Earley

Editors' note: Quite as interesting as the Lost Monster of the Smithsonian is the Hudson River Monster that Charles Fort caught up with when it was headed for the Smithsonian in 1891. See page 96.

FOUND in scattered locations around the world, from North America to Australia, are fields of naturally occurring glass-like objects called tektites. They vary in size from the near-microscopic to almost ten centimeters, and in weight, from less than a gram to several kilograms. Their color ranges from black to various shades of brown and green. They also come in a variety of shapes: spherical, teardrop, discoidal, conical, and rod-like.

The mystery about tektites is their origin, since they seem to bear no chemical relationship to the other rocks where they are found. Several theories have been proposed:

1. They are formed by volcanic activity. However, their chemical composition, chiefly silica, is closer to that of shales and sandstones rather than volcanic glass. If they are formed on earth, they are sedimentary, not igneous.

2. They are formed by meteorite impact. Although this is the view commonly accepted today, it too has its problems. The trouble is that there are no tektites found at the known meteorite-impact craters. This has

led to the suggestions that the tektites may be a product of impacts on the surface of the moon; the fragments escaped the moon's weak gravity and were captured by the earth's strong gravity. The difficulty with this explanation is that the balance of the gases trapped within the tektites—oxygen, nitrogen, and argon—is identical to that of the earth's atmosphere. Thus, they could only have been formed on earth.

No single theory has been able to explain all the data. So I now propose a new theory which I believe covers all the known facts:

Sometime in the remote past, one or more huge meteorites (such as the one which created Meteor Crater in Arizona) struck the earth, throwing tons of molten rock into the atmosphere. The molten material solidified at a considerable height and eventually fell to earth far distant from its point of origin. Similar phenomena are known to occur during volcanic eruptions.

This theory explains why there are no tektites at the impact site, why the trapped gases are identical to the earth's atmosphere, and why the chemical composition of tektites is not igneous. —Kim L. Neidigh

ANCIENT SPACE FLIGHT:

by **Stuart W. Greenwood**

© 1982 by Stuart W. Greenwood

HUMANKIND is distinguished from other terrestrial life by its intellectual pursuits. We are only truly alive when we investigate the unexplained. That search is unending, because nothing is ever explained to the extent that no further inquiry is required. Science concentrates (necessarily) on manageable problems in order to make recognizable progress. It is unfortunate that many of the best minds in science avoid more difficult questions, opening the door to the speculations and assertions of less-disciplined thinkers. The reactions of such scientists to these speculations all too often create a hostile environment that discourages further study. The honest inquirer (the author, by implication, clearly includes himself in this category) tries to steer an objective course through the minefield—respecting the disciplinary tradition of establishment science while showing appreciation of the imagination and energy of speculative thinkers.

The most important question facing our species is that of origins. What is nature, and why? Who (What) is responsible for it? From a scientific viewpoint, this area is a quicksand, and the author is unwilling to walk in it. The second most important question concerns our place in a vast and complex cosmos. Is the intelligence in which we take such pride a unique flowering on the planet Earth, or has it also developed elsewhere? An aspect of the latter question is whether such alien intelligence has interacted with our species in the past.

We have come, then, to the hypothesis (or considered guess) of the visits to our planet in early times of astronauts from other worlds—the Ancient Astronauts. A major opportunity exists for scientists in a wide range of specializations to exercise their talents in a search for evidence. It need hardly be emphasized that the desired concentration of effort is slow in materializing.

The author is an aerospace engineer, belonging to a profession that would be most deeply concerned with any convincing evidence of ancient space flight. The dilemma presented by the search is obvious: any apparent evidence that was recognizable would reflect our present (and early) competence and technology, while apparent evidence of advanced technology might be unrecognizable. It is to be expected, however, that in one respect at least fundamental considerations in regard to the desirability of conserving energy might apply to all space missions. This is admittedly clutching at a straw, but what else is available at this stage?

The key to the approach adopted by this writer for some years is the spin of the Earth about its axis. We are familiar with the fact that the Sun rises in the east and sets in the west. That is our terrestrial perspective. The solar system perspective is that the Earth rotates from west to east about its axis. To gain benefit from this rotation, our own spacecraft take off and land toward the east. The truly significant direction from an astronomical viewpoint is thus the west-east direction.

Dr. Greenwood is engineering manager of the University Research Foundation affiliated with the University of Maryland.

We are conditioned to looking at maps with a prime north-south orientation. Who knows what revelations await those who take the trouble to rotate their maps through a right angle?

The author fancies he has resolved the persistent and powerful imagery of the Feathered Serpent of Central American cultures in this manner—it is the view from an overflying spacecraft, of Florida and the southeastern U.S. as observed in the west-east direction. Another revelation is the Asian Dragon that can be observed from space in the west-east direction.

The Asian Dragon's head is shown separated from ad-

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jacent land masses in Fig. 1 by selecting the view of the Earth below as seen from a spacecraft overflying the area at an altitude of 565 miles and traveling toward the east.

Illustrations by the author



Fig. 1. The Chinese Dragon. China is at the top of the picture and India is below. Lhasa, ancient capital of Tibet, is at the center.

The limiting circle is the cutoff at the horizon at a distance of 2000 miles. We have here the treatment of a relationship between mythology and reality that is the reverse of the customary approach. Instead of beginning with mythology and seeking a real interpretation, we have started with a recognizable situation and discovered an explanation for a myth. The Asian Dragon is not a flying creature or a flying machine invested with living characteristics; it is an association of a terrestrial land area with the conditions under which it was observed—from an overflying spacecraft. Anyway, that is the ball being thrown by this writer. Does anyone want to catch it?

ARCHEOLOGISTS and astronomers (and archeoastronomers, of course) have enjoyed themselves immensely for some time disputing whether ancient sites and monuments may have been oriented in relation to the heavens. It is clearly time for a further stone to be thrown into this particular pond to watch how the ripples spread. Is it possible that such alignments could have been determined in some instances by observation of the direction taken by overflying spacecraft?

We now introduce a series of assumptions to get this thing off the ground (at least the choice of words seems appropriate). Suppose there were spacecraft in early times; suppose they were launched toward the east; and suppose some of the flights departed Earth for objectives within the solar system. A look at Fig. 2 serves to set the scene. The Earth spins on its axis from west to east, the axis being tilted at an angle to the ecliptic plane, the plane of the orbit of the Earth around the Sun. All the planets lie fairly close to the ecliptic plane, so it typifies the plane of transfer for an interplanetary journey.

The simplest case to consider is the launch of a satellite from a point on the Tropics. When the launch site momentarily touches the ecliptic plane, conditions are ideal for launch into a parking orbit preliminary to entering an interplanetary orbit. Such a parking orbit is illustrated in Fig. 2 for launch from a site on the Tropic of Cancer. The motion of the satellite after launch is controlled by the Earth's gravitational pull. Following the easterly launch at A, the craft first swings down toward the Equator, crossing local parallels of latitude at progressively increasing angles. On crossing the Equator at B the angle made with the local parallel of latitude reaches a maximum. The orbit then continues as far south as the Tropic of Capricorn which it touches facing toward the east. The path traced on the other side of the Earth coincides with that shown in the diagram except that now it approaches any given point from south of west rather than from north of west.

To make things more interesting, the vehicle path is substantially fixed relative to the Earth while the latter spins beneath it. On completion of one revolution, the satellite returns to A in the diagram to find that the launch site has moved off toward the east. To illustrate this effect, a satellite just above the atmosphere with an orbital duration of 1½ hours would have to circle the Earth 16 times before it again overflew the launch site.

What are the implications of the above for observing the direction of approach of the spacecraft from a point on the ground? First, it is obvious that such observations could only be made between latitudes corresponding to the latitude of the launch site; the satellite would not be visible from higher latitudes. Second, the angle of approach would increase as the latitude diminished. Third, the direction of approach would as likely be from south of west as from north of west.

If the departure rather than the approach were being observed, the direction would as likely be north of east as

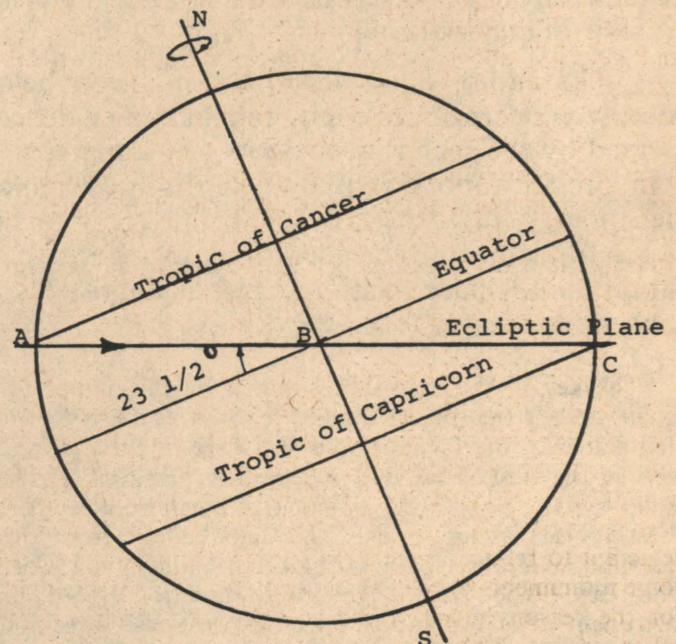


Fig. 2. Arrow shows flight path for satellite launched toward the east at a point A on the Tropic of Cancer when the launch point touches the ecliptic plane.

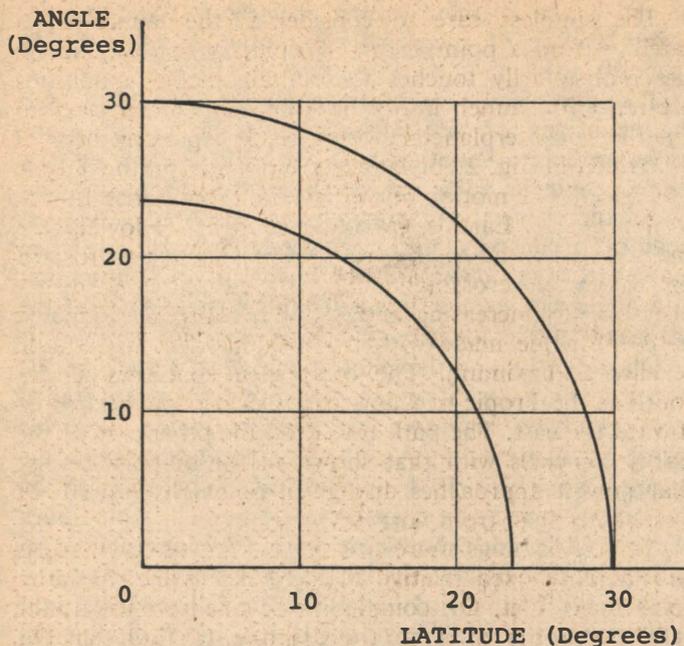


Fig. 3. Angle at which satellite path crosses parallel of latitude for easterly launch, assuming non-rotating Earth.

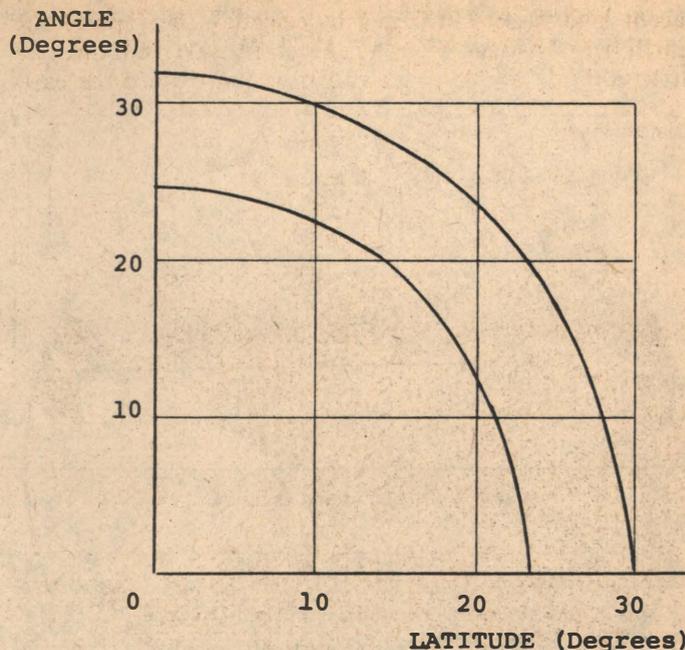


Fig. 4. Angle at which satellite path crosses parallel of latitude for easterly launch, allowing for Earth's rotation.

Figs. 3 & 4—Upper curve: launch from latitude of 30 degrees—Lower curve: Launch from latitude of 23½ degrees (Tropic).

south of east. Before we look at specifics, let us set out the expected consequences of the above considerations to form a basis for judging the hypothesis: that orientation of ancient sites may have been significantly influenced by observation of overflying spacecraft:

1) Such sites will be located primarily in the lower latitudes.

2) The orientation of a site to the west-east direction is likely to be at a higher angle the closer the site is to the Equator.

3) The orientation is as likely to be south of west as north of west (for an approach orientation) or north of east as south of east (for a departure direction).

Every site and every monument is oriented somehow, and item (1) above is really unhelpful in that we are obliged to concentrate on sites in the lower altitudes anyway by the nature of the hypothesis. We are effectively left only with the remaining two criteria. Unfortunately for the hypothesis, a review of Central American site and monument orientations indicates that angles to the west-east direction show a general tendency to decrease toward the Equator, and there is a predominance of north of west rather than south of west orientations. Could anything be less encouraging?

OF COURSE, it might be better to forget the whole thing at this point, and content ourselves with the knowledge that a good idea was pursued and resulted in a negative solution (that's progress of a kind, so we are told). It wouldn't be all that fun, however, and if you've ever been gripped by a hypothesis you must know that it is reluctant to release its hold. Suppose, then, that perhaps some monuments or sites (a minority, even) were oriented for the reasons given, while the rest were oriented for other reasons. After all, why not?

The author almost overheated his pocket calculator working out the angle at which a satellite launched toward the east would cross a given parallel of latitude.

The reader can check the results shown in Fig. 3 for a "non-rotating" Earth, and the more accurate results allowing for the Earth's rotation in Fig. 4, simply by using the equations given in any textbook on celestial mechanics.

The advantage of using the results shown in Fig. 3 is that, for launch latitudes up to 30 degrees, you can reproduce the curves for any given launch latitude with sufficient accuracy by drawing an arc of a circle centered at the origin of the diagram. The correction for the Earth's rotation incorporated in Fig. 4 is seen to be to increase slightly the angle of the satellite crossing at lower latitudes. For a preliminary investigation, Fig. 3 gives a ballpark result to which you can then make a small modification along the lines of Fig. 4. Anyway, satellites, like other spacecraft, can have their orbits modified after launch, so why not admit right away that we're on soft ground (and anticipate the skeptics, who should find lots to get their teeth into here).

TO TAKE A FLING at this particular adventure, you're going to need some good source data—always a sound requirement for any investigation, and particularly when you're playing around with the Ancient Astronaut hypothesis and the eyes of the scientific establishment are upon you, waiting to pop. An introductory list of references is given at the end of this contribution, and should provide a foundation for pursuing this line of thought. The subject can be approached from either of two directions, and we shall attempt both. In either case, we need data on site latitude and site orientation, the latter being with respect to true (not magnetic) directions. It is really amazing how often the distinction is not made on maps; discovering which is intended can be a time-consuming exercise.

The first treatment of the present approach will be to take a given site and apply the hypothesis of orientation to overflying spacecraft to determine the latitude of the

corresponding easterly launch. Consider the impressive temples on the Great Plaza in Tikal, in what is now Guatemala.

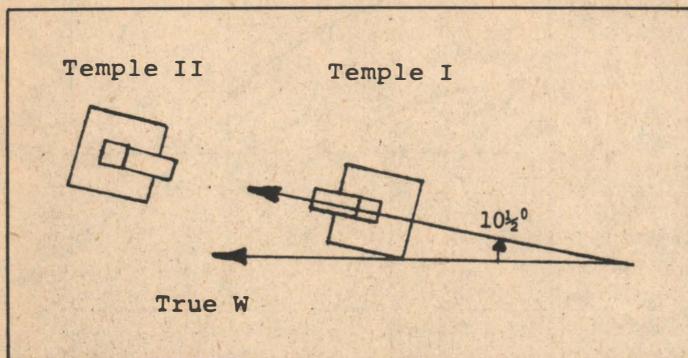


Fig. 5. Orientation of the main temples at the Great Plaza, Tikal.

As shown in Fig. 5, Temple I is oriented north of west and faces Temple II, oriented south of east. The orientations are $10\frac{1}{2}$ degrees to the west-east direction. Temple I is oriented to the approach, and Temple II to the departure, of an overflying spacecraft (one prays that this will not be quoted out of context). The following exercise is left to the reader: Take a sheet of graph paper, mark the latitude of Tikal (17 degrees) on the horizontal axis as in Fig. 3, move vertically upward to an angle of $10\frac{1}{2}$ degrees corresponding to the orientation angle, mark this point on the paper, take a compass and draw the circle arc centered on the origin through this point, and the value of latitude at which it crosses the horizontal axis is the launch latitude. The answer is about 20 degrees. One can now have fun looking at all potential launch sites on latitudes 20 degrees north and 20 degrees south to see if anything potentially interesting materializes. You can see the boundless possibilities of this form of investigation.

The second treatment will be to take a given launch latitude and match it with the latitude of a selected site to see whether it gives an orientation existing at the site. Suppose we consider launch from a point on one of the Tropics at a latitude of $23\frac{1}{2}$ degrees (this angle varies a little historically, but we have yet to worry about such refinements while our hypothesis has still some way to go). Now consider the extensive markings and drawings

on the Nazca Plain in present-day Peru. The representative latitude of these markings may be taken as 15 degrees south.

This one seemed important enough to me that I used the equations of celestial mechanics to compute the corresponding orientation angle directly. It came to 19.4 degrees, and the value can be checked on Fig. 4 as it includes the curve for a launch from one of the Tropics. Read off 15 degrees latitude on the horizontal scale, then move vertically upwards to the lower curve. The orientation angle can then be read off the vertical scale at the left as about $19\frac{1}{2}$ degrees.

On a portion of the photogrammetric survey of the Nazca area conducted by the Peruvian government (taken from *Archaeoastronomy in Pre-Columbian America* edited by Anthony F. Aveni), the orientation angle developed above of 19.4 degrees was superimposed on the survey to indicate a spacecraft approach from south of west. The correspondence with the lines and symbolism in this region of the Nazca Plain is striking. I suppose the frigate bird just has to be flying off at right angles to just about everything else to put a damper on the whole thing.

It is worth recalling that the orientation data derived for a launch from one of the Tropics can also be applied to a craft launched elsewhere but whose orbit has been modified to lie in the ecliptic plane for departure on an interplanetary journey.

All this is heady stuff, and calls for much dedication and patience with uncertain expectations as to where it might lead. The writer will settle for his resolution of the myths of the Winged Serpent of Central America and the Asian Dragon. When you come to think of it, that's quite an accomplishment in itself.

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Morag of Morar (Continued from page 51)

its head. It was filmed, as were conventional boat wakes, to show the contrast.

In late September, overflying Morar, we saw something very strange lying on the loch bed in about three meters of water in an area we had covered a few days before and which on the earlier occasion showed nothing unusual. The "thing" appeared to be about six meters in length and had what could be fins or paddles, but not the four I expected to see. (I was being subjective and not objective, hoping to see a plesiosaur.)

A cine-record was made from

heights of between 500 and 200 feet. A low pass at 50 feet nearly put us into the water when we hit a "sink" area. Climbing away, I took several still monochrome photographs.

Then I saw about 30 meters away from the "thing," another "thing." Only this time, Thing No. 2 was most definitely moving slowly, about a meter under the surface. I managed one 35mm still frame of it, then it descended into deeper water, out of sight.

A polarizing filter had almost completely eliminated surface glare. It could not counteract the small sur-

face chop that distorted the resulting photographic image, which appeared to be of an object 7 to 8 meters long, moving to the northwest at possibly one or two knots. It appeared to have a neck and a tail but only two fins could be seen, and these were on either side just forward of amidships.

I managed only one dive in the area after that, and in one bay I came across a log which did not appear to relate either to Thing No. 1 or Thing No. 2. What had I seen? I very much doubt if No. 1 was an animate object. Its shape wasn't

(Continued on page 63)

The Search for Ancient Aquanauts

by Harry Lebelson

A GLIMPSE of another world may lie hidden among the myths of our earliest civilizations. A number of scientists and authors have been exploring these myths in detail. Although the investigations give little credence to ancient myths as proof of ETI contact, they confirm such tales as the Sumerian legend of the Oannes. These fish-like beings, resembling men, visited the ancient cultures from time to time over a span of 1,500 years.

Berosus, a priest who lived in the city of Babylon during the reign of Alexander the Great, preserved for posterity accounts of early Babylonia (Sumeria) and the visitations of the

Oannes. In his documents, Berosus recalls that "There made its appearance from the Persian Gulf during an early time in Babylonian history, an animal endowed with reason, called 'Oannes'." The historian went on to describe the animal as fish-like: "The whole body was like that of a fish, with a fish head and the feet of a man joined to a fish tail. Its voice, too, and language were articulate and human." This being, the priest claimed, was amphibious: "It conversed with men in the daytime; when the sun set, it would plunge into the sea and remain there for the night."

Berosus tells how the population at that time was primitive and, until the Oannes came, lived like beasts of the field. The Oannes were described as teachers who gave the people insight into letters, the sciences and art. Referring to cuneiform and pictographic records compiled several thousand years before his time, Berosus describes how the Oannes taught the people to found temples and codify laws; they taught the principles of geometrical knowledge and "everything to humanize mankind," as Berosus put it.

Carl Sagan seems in agreement with this ancient documentation: "I support the contention that a major cultural change did take place with the advent of the Oannes," says the Cornell astronomer.

Existing records show that in addition to the Oannes, Berosus chronicled the appearance of a succession of sea creatures over the course of several generations. Sagan goes on to say in his book *Intelligent Life in the Universe*, that "these beings were interested in instructing mankind. Each knew the mission and accomplishments of his predecessors. When a great inundation threatens the survival of this knowledge, steps are taken to insure its preservation. Thereby, the access of Berosus to antediluvian records is formally explained."

As far back as 1966, concepts regarding the existence of amphibious beings with high intelligence were being considered by some serious



Composite Model
'Aquanaut'

scholars. In their book *Intelligence in the Universe*, Roger MacGowan and Frederick Ordway state that humans, being land animals, tend to think in terms of land animals when considering intelligence. "A liquid environment," claim the authors, "provides more buoyancy and support for animal bodies than does atmospheric gas. For this reason, a marine environment may be expected to develop many species that are larger than most land-animal species." They propose that if larger bodies can support larger brains, one might expect to find superior intelligence among larger marine animals. MacGowan and Ordway are tempted to



Dale Russell's
'Dinosauroid'

assume that because of the potential for larger size, the great variety of life, the stable environment of the oceans and the competition among species, most intelligent extrasolar life may be marine as opposed to land-dwelling.

Why should these creatures have come from the sea? Dr. Dale Russell, curator of fossil vertebrates at the National Museum of Canada, Ottawa, offers some observations about the evolution of non-human intelligence. "Perhaps high intelligence may be a natural result wherever life evolves in the universe, and maybe man's general body form is no accident," he speculates. Russell goes so far as to suggest that man could have evolved from a species of dinosaur, had dinosaurs not become extinct.

If, in fact, these creatures did evolve as fish-like beings, perhaps they found our planet hospitable, since 90 percent of it is covered by ocean.

Robert Temple, author of *The Sirius Mystery*, supports the theory that earth may have been visited by intelligent beings from the stars, though he can't say for sure whether we were visited by survivors of an aquatic planet whose sun went supernova. He does confirm that he has found certain startling myths in the ancients' view of the universe.

In *The Sirius Mystery*, he explores the origin of the Legend of the Nommos—those intelligent amphibious creatures allegedly come from the Sirius star system to set up society here on earth. This ancient myth had been handed down orally from generation to generation among members of the Dogon tribe in Mali, West Africa. In his book, Temple credits responsibility for the preservation and recent resurrection of the tale to two French anthropologists, Marcel Griaule and Germaine Dieterlen. In an article published in the French anthropological journal, *Journal de la Societe des Africanistes* in 1950 entitled "A Sudanese Sirius System" (referring to the French Sudan area of that time), the anthropologists reported on four Sudanese tribes which had information about the Sirius star system so specific that it seemed impossible for any primitive tribe to know. The tribes were the Dogon in Bandiagara, the Bambara and the Bozo in Segou, and the Mirianka in Koutiala. The main investigations,

however, were carried out among the Dogon people between 1946 and 1950 when four major informants (priests of the Dogon) were interviewed.

"The Dogon legacy imparted to Griaule and Dieterlen is primarily oral, though there are many related physical objects which constitute important physical evidence," states Temple. He notes that the Dogon had a system of 11,616 written ideogrammatic signs to express concepts and things, which they used with immense subtlety and complexity. The Dogon did not, however, use written characters to represent sounds or to form sentences.

The Dogon's most secret religious tradition was their knowledge of the Sirius star system. It consisted of Sirius A, presently the brightest star in the sky; Sirius B, a white dwarf and the tiniest form of visible star in the universe; and the possible presence of a Sirius C (its existence has yet to be proven). The anthropologists, in recording the Dogon beliefs, make clear that the bright star of Sirius A is not as important to the Dogon as the tiny Sirius B: this star, named Digitaria by the tribes, is claimed to be the home of the amphibious beings called "Nommos."

Temple points out how the Dogon compared the heavenly motions within our Milky Way to the circulation of the blood. The planets and their companion bodies were considered the blood; how they traveled around each other was symbolically thought to be the circulation. The African tribesmen likened both the star system of Sirius and our own solar system to a cosmic placenta. Our solar system is referred to as 'Ogo's placenta', the word Ogo meaning "the fox" or impure earth. Sirius and its companion stars are referred to as 'Nommo's placenta', Nommo being the collective name for those amphibious creatures who set up society on earth and who thus became the traditional equivalents of the Sumerian/Babylonian Oannes. The landing of the Nommo on our earth is called 'the day of the fish', and the planet they came from in the Sirius system is known as the (pure) earth of the day of the fish . . . not (our) impure earth.

"Their religious beliefs tell how Ogo represents man in all his cosmic impurity, and how Nommo came to earth, crushed the fox (Ogo-man) and

ended feudal development, leaving the best elements of civilization in its wake for us to possess," says Temple. According to the legend, the Nommo will once again come to earth and study the progress made by mankind. These native beliefs were among those recorded by Griaule and Dieterlen along with other astronomical and scientific theories. Some of the information revealed a native perception of the earth and the solar system so advanced as to defy explanation. The Dogon knew that the earth turns on its axis, revolves around the sun, has a calendar year of 12 months, and that 365 days go to make up one calendar year.

In addition to their scholarly article, "A Sudanese Sirius System," anthropologists Griaule and Dieterlen produced a book-length publication, "The Pale Fox," published in Paris in 1965. Their joint findings do not draw any definitive conclusions of extraterrestrial contact with the Dogon but merely suggest the possibility. In *Le Renard Palé* (The Pale Fox), they discuss in detail Dogon belief and knowledge as it relates to astronomy and the Sirius system. The Dogon also recounted to the anthropologists specialized data regarding the nature of the planets in our solar system and the coming to earth of the Nommos. Temple, in *The Sirius Mystery*, confirms the accuracy of that information: "Of the moon, they say it is dry and dead, they know Saturn has a ring around it and that the planets are stars that turn around something." He adds that the descriptions given these scholars as to the Nommos' descent to earth were reminiscent of a large object with a thunderous exhaust leaving in its wake a whirlwind of dust and dirt. "The violence of the impact roughened the ground as it skidded along," the Dogon noted as they likened the noise to "the echoing of four large stone blocks being struck with stones by our children." The ark or object landed on the earth northeast of Dogon country, in the direction of Egypt and the Middle East.

The tribesmen also spoke of the Sigui ceremony: Identified by the Kanaga sign, in the form of our letter H, the sixty-year ritual celebrated the re-creation of the world by the

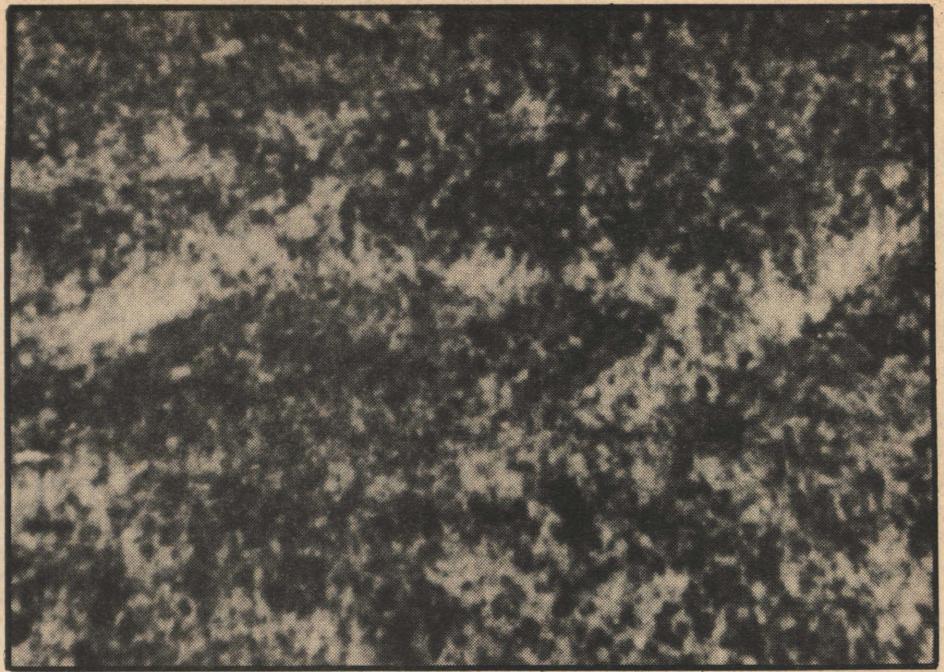
Harry Lebelson is well known to Pursuit readers for his frequent contributions to OMNI magazine.

Dogon god Amma, and the instruction of that world by Nommo, his son. Robert Temple implies that the knowledge of such a cycle attests to a continuing tradition of observation by a priesthood with astronomical inclinations. He then details the influence and importance of the Sirius star system to Egyptian culture as evidenced by the Egyptian calendar with its "star clocks" or risings of the stars by which the months, weeks and days were counted. The main focus of attention, Sirius, formed the basis of this calendar, with the last star of the constellation Orion rising above the horizon one hour before Sirius.

Orion also became significant in Egyptian mythology and religion; it was the companion of both Sirius and the constellation of the Great Dog of which Sirius was a part. "If Orion was the companion of Sirius," Temple reasons, "it could then be considered interchangeable with Osiris, a known companion of Isis, and chief Egyptian god." This information was ascertained through Profs. Otto Neugebauer and Richard Parker, co-authors of *Egyptian Astronomical Texts*, who identified the star Sirius with the famous goddess Isis. Temple continues: "We know that the 'companion of Sirius' is in reality Sirius B; therefore, it is conceivable that Osiris-as-Orion, 'the companion of Sirius', is a stand-in for the invisible true-companion Sirius B."

Professor Wallis Budge, an Egyptologist, tells us in *The Sirius Mystery* that the oldest and simplest form of the name Osiris is a hieroglyph of a throne and an eye, the eye positioned either above or below the throne or seat. This interpretation by the Egyptians around Sirius B or Osiris as revolving around Isis or Sirius A. The Bozo tribe in Mali, one of the four interviewed by anthropologists Griaule and Dieterlen, related that Sirius B was known to them as the eye star; they also described Sirius A as seated. What they said parallels the findings of Professor Budge and, according to Robert Temple, seems to indicate that "the Sumerians from whom the Dogon inherited their information about Sirius, and the ancient Egyptians, derived their primeval gods from some common but exceedingly ancient source which could not have been the result of borrowing."

Professor Budge refers also to ancient Egyptian texts which speak of



• UFO 'imprint' at Mulhouse-Riedisheim, France, 1971

holy emanations coming from Sirius and Orion which vivify gods, men, cattle and creeping things, and are a pouring-out of the seed of the soul. Temple says the Dogon express the same thing in almost precisely the same terms: "To them the seed which energizes the world pours forth from the Sirius system."

Scholar Zecharia Sitchin, like Robert Temple, attempts to go beyond unanswered speculation to show that the earth has been visited by advanced beings from another planet. In his book *The 12th Planet* he attempts to decipher clues left by ancient Sumerian texts, the Bible, and Mesopotamian legends. His analysis of these documents and the ultimate conclusion of his book suggest that the earth was settled by the 'Nefilim' or eagle-men, anthropomorphic beings wearing uniforms, who brought civilization to the planet in the area known to us as ancient Mesopotamia. Sitchin uses these sources to show how the beings came to earth from a planet as yet undiscovered. While Sitchin, with over 30 years of scholarship behind him, advocates visitation to earth by astronauts from another planet, Sagan and Temple cautiously present their information in an atmosphere of reserved skepticism.

"A lot of people who will enthusiastically receive my researches with open arms are the sort of people one least wants to be classed with," states Temple. "That doesn't bother

me, though. There's still a lot about ancient history that we don't know." Interestingly, certain patterns associated with the Oannes and Nommos mythology persist in contemporary reports and in the media:

► In 1971, on a grassy field at Mulhouse-Riedisheim, France, a large circular imprint with the letter H inside it was found burned into the grass shortly after a rumored UFO sighting. (See photo above.)

► It was during the evening of October 17, 1973 that Early Patterson, a Vietnam vet residing in Eupora, Mississippi, claimed an encounter with a UFO. At the intersection of Highway 82 and Grady Crossing the witness observed an object lying across the highway obstructing traffic in all directions. Patterson's automobile, with its electrical system dead, came to a stop less than 300 feet from the object, described as resembling a coffee cup and saucer, or saucer with a bubble top. From the bubble a fish-like creature emerged. Early Patterson described the creature as having the head of a catfish, with a large suction-type mouth breathing air. Its arms tapered down to accommodate two fins instead of hands. The being's tight greenish-blue skin covered a human-like torso with two legs ending in webbed feet. Patterson was not the only witness; six people in the automobile directly behind him also glimpsed the phenomenon. The

creature was in view for approximately five minutes before retreating inside the object and leaving the area. [Later

the same evening, witness Patterson was interviewed by Jack King, manager of radio station WROB, West

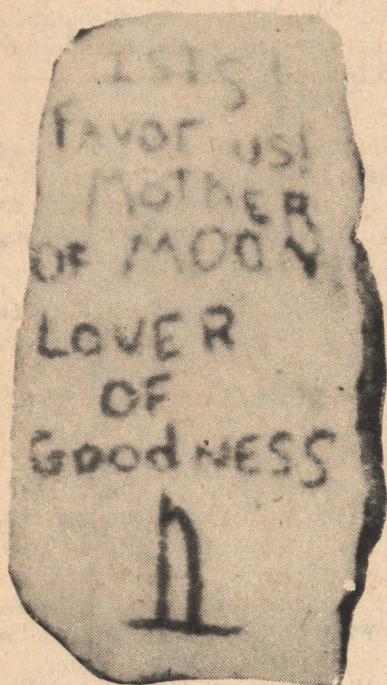
Point, Mississippi. A verbatim transcript of the broadcast is printed in adjacent columns. —Ed.]



► On December 15, 1974 at 12:30 p.m., Jorma Viita, a shipyard worker, walking in an open field near his home in Odense, Denmark, spotted and

photographed an unidentified flying object at a distance of 350 meters. The object bore a mark or symbol on its underside similar to the letter H with a

vertical line through the crossbar. On a previous occasion, Viita photographed two similar objects with identical markings.



► On April 14, 1976, in a remote area visited by law officers who were investigating a rash of cattle mutilations in north-central Montana, stones were found bearing strange inscriptions. These stones, along with smaller rocks, landscaped a pit 61 feet in circumference. The pit was believed to have been used as a ceremonial site by cultists. The largest stone slab bore the inscription "ISIS! FAVOR US!

MOTHER OF MOON, LOVER OF GOODNESS." Beneath this inscription was a drawing of the ancient symbol of Isis, the throne or seat. Adding to this bizarre find was the report, at that time, by an Idaho forest ranger of two strange hooded figures dressed in black robes, seen in a heavily forested area carrying a bag. The ranger noted that the hoods of both robes were pointed and had a partial opening. He was unable to get a look at their faces; as they walked, they continually looked straight ahead, never once turning their heads.

The Cascade County sheriff's office in Great Falls, Montana, received numerous letters and suggestions as to the possible cause of the cattle mutilations. One such letter, from a Macomb, Illinois, psychic, proposed a scenario similar to that presented by Robert Temple and hinted at by Carl Sagan in their respective books. The psychic claimed to be in touch with beings from a UFO who claimed responsibility for the cattle mutilations. He described them as purplish-black, smooth-skinned, fish-like beings. Their mouths were like suction cups, the cheeks smooth but bony. Dressed in rubbery suits, they wore cloth-like capes over their heads and shoulders. Their gait was deliberate, head and shoulders moving simultaneously as if devoid of neck. They were here, the psychic asserted, to monitor the pro-

gress of mankind. Their mission was supposedly to be accomplished by obtaining specimens of our animal life, and also human beings.

This provocative sampling of events, along with others, stands as an outpost on the borderland of science. Even today, as anthropologists continue to discover possible new explanations for man's early acquisition of knowledge and development, much skepticism prevails.

More than 20 years ago British marine biologist Sir Alister Hardy proposed that man might be descended from an aquatic ape. Since that time, others have elaborated on Hardy's ideas. In a recent article about Alister Hardy in Science Digest magazine, author Lyall Watson suggests that there is plenty of room for an alternative explanation of evolution. He notes: "The fossils that decorate our family tree are so scarce that there are still more scientists than specimens." He also points out that all the physical evidence we have for human evolution can still be placed, with room to spare, inside a single coffin!

Even if it is proven that man is not descended from an aquatic ape, he may very well have been helped along the evolutionary road by aquatic beings from the stars.



Interview with Early R. Patterson, Churchill Drive, Eupora, Miss., October 17, 1973. Interviewer: Jack King, Manager, Radio Station WROB, West Point, Miss. Incident took place on Highway 82 at Grady Crossing, 4½ miles west of Eupora, Miss.

Mr. Patterson, would you tell me about what you saw earlier this evening?

I've seen something, something I've never seen before. Whatever the thing was, it was shaped like a saucer and a coffee cup. The coffee cup leveled off with the saucer, that's the way it was built. This thing, I'm saying, it had one eye and it glowed, it came out of the top. There was another object right above the bottom one. It was about 15 to 20 feet high. Several people seen this. Just before this thing touched the ground, I had my headlights on when all of a sudden my lights went out and my car went dead.

I seen something tonite and believe me, so help me God, I don't ever want to see again as long as I live. I seen something tonite that looked so real and I tried to tell the law but they laughed at me. I got proof that I wasn't the only person who seen what I've seen tonite.

Mr. Patterson, about what time did this occur?

It was about 7:30 tonight.

So it took place at 7:30 on Highway 82. On which side of Eupora is that?

At Grady Crossing.

Where is that in relation to Eupora?

It's just west of Eupora.

About how far is Grady Crossing from Eupora?

It's about 4½ miles west of Eupora.

When this object came down, did it come down on the center of the highway itself?

It landed almost dead center on the highway. It was even hanging a little over the edge of the highway.

Did it fill up the whole highway?

It filled up the highway from one side to the other and was hanging off the shoulder on both sides.

Was it on legs of any sort or did it hover above the ground or sit on the ground?

This is going to sound funny, but the thing sat like a saucer set on a table and it had glowing lights formed like a triangle which looked like legs on the bottom of the thing. The whole thing was setting about 2 or 3 feet off the ground.

Mr. Patterson, could you describe the shape of this object again?

The top of the thing was like a cup or a bubble and the bottom was like a round saucer. Three different parts of the object were glowing. It had about 8 lights on it as far as I could see. Little bluish green lights which were flashing on and off.

From what part of the object did the creature come out of?

The thing came out of the bubble part on the top. It just opened up and he came out.

When he came out of the object, did he come to the ground?

No, he just came out from the top and observed over the side while another object hovered above it and shined a light down on the bottom object. There were 3 little antennas with little balls attached to each one, like on a satellite, on the top of the bubble where he came out of.

Can you describe the appearance of the creature?

Going according to my height, I'm 5 feet 8 inches and

where this thing was on the object, I'd guess he was about 6 feet 3 inches tall. It had two feet that looked like frog feet. It had a body that looked like a human being but from its waist up it looked like a catfish. **Do you mean it looked like a catfish because of the shape of its mouth?**

He looked like a catfish from his waist up and had a mouth as wide as a catfish. His mouth continued to open and close, open and close, open and close.

Did the creature have two arms, two legs?

Let me tell you somethin'. You may think I'm lying but whatever that thing was, it was a catfish from the waist up and behind his back was something I can't describe.

Did it appear that he was carrying something on his back?

No, it was, I don't know what it was. When he hopped over the side of the object, I saw what looked like two feathers on his back which opened and closed as he moved.

Could you describe the creature's appearance once again?

Have you ever seen a flying squirrel? Well, he has something between his feet, like webbing. This creature had the same thing on his two feet. They looked like flippers. He had two arms like a human, with two hands that looked like fish or seal fins, which flopped as he moved.

When the creature stepped over the side of the craft, how did he hold onto the object?

There was a bar around the whole object near the lights which he held onto.

How high up was the other object which stayed in the air?

It was, I guess, about 60 feet up.

How close were you to the object?

I was no more than 100 yards away from it. There was a car only 3 or 4 feet behind mine at the time this took place. That's why I say I've got proof of what I've seen. There were seven other witnesses who saw what I saw.

Do all these witnesses live in your immediate area?

They all live in the area around Eupora, Miss.

Were there any cars on the other side of this object that witnessed the event?

One car at the top of the hill on the other side must have seen one of the objects. When he came over the hill, he made a U-turn and went in the opposite direction.

What did the craft appear to be made of?

I'm going to be frank with you. It appeared to have a funny look. It looked like a honeycomb effect with a spider web going all through it. It had all sharp-cut corners like a beehive effect all over. It had glowing lights, the kind that when you look at them, you can't get your mind off looking at them. There were also individual lights flashing a greenish blue, greenish blue, greenish blue.

Were there other lights in addition to those on the craft?

The creature, from where I was, appeared to have one big eye in the center of its head which glowed like a flashlight.

Did the creature appear to be wearing clothes or a uniform?

No, it just had greenish skin which was very tight on its body.

When the objects left, did they take off at great speed?

They took off just like a Huey helicopter. The reason I know this is because I was a Huey helicopter pilot in Vietnam. It also made a peculiar sound that went whee-o, whee-o, whee-o as it took off. That's the whole story as far as what I've seen, even though I know, that no one will believe me.

Causality and Synchronicity as Natural Principles

by Delwin D. Cahoon, Ph.D.

CAUSE AND EFFECT, or causality, refers to an invariant sequence of events in which A has been observed to precede B. As David Hume explains¹ this relationship in no way implies a compulsive force of A upon B, simply that an A-B sequence has occurred with regularity. Cause and effect statements (natural laws) are generalizations based upon past experience and not necessarily true eternally. Any natural law, no matter how well documented, could conceivably fail at any time.

Some coincidental events, not analyzable in terms of causality, seem to be meaningfully related. The Principle of Synchronicity, popularized by Carl Jung,² involves events so startlingly coincidental that to dismiss them as merely accidentally related seems inadequate. Examples are available to most people through personal experience: dreaming of a loved one at the time of death, a run of similar numbers from various sources, and letters that cross in the mail, are familiar. In none of these instances would we suggest that the concept of cause and effect applies. Dreaming of a person could not *cause* his death in any conceivable manner. On the other hand the two events may be so closely related in meaning that we are compelled to believe that something other than chance is operating. Jung assigned a role to synchronicity equivalent in importance to causality. However, it should be noted that synchronicity and causality are interpreted as complementary polar concepts rather than competing principles. Synchronicity is viewed as an acausal principle in which simultaneity and meaningfulness are the essential characteristics. In order to obtain a full picture of reality we must be able to explain the coincidental but meaningful event in a manner that causality cannot. For Jung, the material universe is structured around the physical dimension of indestructible energy versus space-time, while the psychological dimension is structured in that same universe around the opposite poles of causality and synchronicity.³ The usual criticism leveled against Jung is that the events seen as meaningfully connected are actually chance-related but perceived as meaningful by the observer. In the present article the existence of an acausal but meaningful relationship among events is accepted as axiomatic.

The object of this paper is to offer an analysis of causality and synchronicity in which the concepts are viewed as orthogonal rather than as opposites. In so doing a simple pictorial or imaginal model is used, appropriate to the fundamental nature of the principles being considered. The closer that one approaches basic cosmological issues the more mythical explanations necessarily become. As an illustration, one can not mathematize the concept of "first cause," one can only tell stories about it. In the present instance we have a story about causality and synchronicity.

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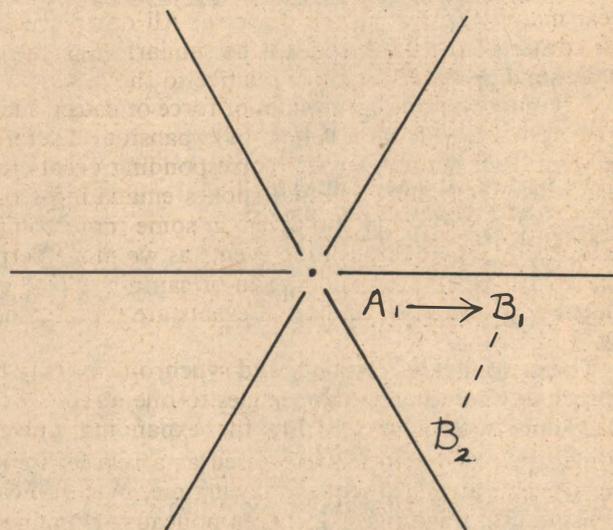


Fig. 1. Dot at center represents the primordial point from which the "big bang" originated. Lines represent the uniform expansion of the universe away from that point in space-time. Since the differentiation of matter and energy is duplicated along each line, similar events on adjacent lines are synchronistic although not causally related ($B_1 \dots B_2$). Causality is represented by successive events along the same line of expansion ($A_1 \longrightarrow B_1$).

Let us accept that the universe began from a single exploding point (the "Big Bang" theory). In one cataclysmic microsecond a chain of events was established which continues in an unalterable sequence of cause and effect. Because no counterforces exist in any "direction" the expansion is uniform with respect to the origin and a spherical universe is created. The fact that astronomy does not provide direct evidence of a spherical universe is of no consequence because of our restricted view. We have no way whatsoever of knowing how large the universe actually is or what "form" best describes it.

Since we have assumed that the explosion occurred from a single point, it would seem that from the standpoint of matter the origin must have been homogeneous or even nonmaterial. Any differentiation of substance took place after the explosion began rather than in the central point. Given a homogeneous beginning and uniform expansion, the differentiation of matter and energy must also be uniform with respect to the center as the ball-universe expands.

In Fig. 1 the expanding spherical universe has been more simply schematized as a two-dimensional diagram. Lines representing vectors of expansion or causation are seen to radiate outward from the primordial point. Causality is then seen as a basic principle describing a succession of events occurring in temporal order along the radiating lines of force ($A \longrightarrow B$). As noted above, since the differentiation of matter occurs uniformly in all

dimensions from the center, and since the center is homogeneous, it is reasonable to assume that all of the vectors are essentially identical. The implications of this assumption are quite interesting. Consider your own existence as an event occurring along the space-time dimension of a single line of causation. Because there are a very large number of identical lines, an infinite number in the sense of differential calculus, it follows that there are a great many "You's" in the universe. All other events in our corner of the universe must be similarly replicated at corresponding space-time loci relative to the origin.

Of course the concept of lines of force or causal vectors is an abstraction from a sphere of expansion. Therefore, we would not actually expect corresponding events to be neatly arranged along celestial spokes emanating from a central hub. We would, however, in some more complex fashion, anticipate duplicating events as we move perpendicularly across the expanding fan of causality. Two such related but acausally-connected events are represented in Fig. 1 as B₁---B₂.

The principles of causality and synchronicity may then be seen as operating at right angles to one another in the space-time matrix created by the expanding universe. While cause and effect is expressed as a relationship between events arranged sequentially in time, synchronicity is a meaningful relationship between noncausally connected but isomorphic events occurring at the same time but adjacent to one another in a spatial or material dimension. An interesting derivative from the assumption that causality derives basically from universal expansion has to do with an end point of the process. According to some theorists (Einstein among them) the universe may begin to contract following maximum dispersion. If this should take place, and if events are actually inexorably ordered relative to the beginning, we would expect contraction to follow a path of exact reversal with respect to expansion not unlike a movie film run backward. Since the order of events would be reversed, as the universe shrinks we would observe the curious (to us) phenomenon of consequences preceding and thereby "causing" antecedents. "If winter comes can fall be far behind?"!

We do not actually label events as synchronistic unless their temporal proximity is close enough to elicit feelings of awe or amazement. If we expand the time frame even slightly, however, we will encounter a much wider range of

meaningful correspondences. For example, if one dreams of a death that actually takes place some years after the dream, we would not consider the two events to be synchronistic by definition. However, the strict temporal restriction that we apply to synchronicity is a product of our very brief existences. If it were not for this restriction on the concept, we would encounter many more instances of synchronicity, for otherwise meaningful relationships separated in time are commonplace.

The mechanism(s) by which we symbolize and perceive happenings in lines of causality adjacent to our own is not known. Presumably, it involves a perceptual movement "sideways," which is possible only when we abandon our typical mode of thought based upon causality. Since sequential reasoning is disrupted by heightened emotion, psychic experiences are most likely to involve intense feelings. Progoff⁴ provides an interesting discussion of this point based upon his conversations with Jung. If we grant the possibility that the universe does not expand in a perfectly uniform manner,⁵ explanation becomes even more straightforward. Then we might suggest that a death dream, for example, may not reflect a concurrent death which may have already occurred "next to us," and we are sensing this earlier event. The existence of lines of causality which are not identical nor perfectly isomorphic also provides a possible explanation for such anomalous phenomena as UFOs, Bigfoot, angels, etc. Although such observations are often described in terms of "other dimensions" or "parallel universes," somehow opened by the human psyche, these concepts are usually undefined. The present analysis provides at least a hint as to how and where these other worlds might exist.

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Morag of Morar

(Continued from page 56)

quite right. No. 2 was the real thing, but what it is I cannot say. If a plesiosaur, why not four fins? If a zeuglodon, wasn't the neck too long?

The weather worsened, snow fell and winds Force 6, 7 and 8 were the order of the day. We packed up the microlite and Breen flew back from Skye to Oxford. What of the future? The four sightings of my own (disregarding Thing No. 1) in March and September 1981 confirmed for me the validity of my hypothesis as to when and why the creatures surface or swim just subsurface. Smith's

sighting of a further creature brought our 1981 season bag to five.

* * *

The bad weather that forced Syd Wignall to abandon his quest last year only strengthened his resolve to try again. "When are you coming to Scotland?" he asked in a mid-June letter to Joe Zarzynski, a fellow investigator and the chairman of the Lake Champlain Phenomena Investigation. By way of introduction since the two were yet unacquainted, Wignall enclosed a copy of the foregoing

article as originally published in the British magazine Diver. Zarzynski responded with a copy of Pursuit and outlined his plans for yet another summer at lochside. Back came Wignall's permission to retell his story to the readers of "your society's excellent magazine."

By the time you read this, the persistent pair will again be probing the mysteries of the loch phenomena. We wish them success and promise to pass along a report on their research stint of 1982.

—The editors

ESPionage:

Have 'Mind Control' Techniques Supplanted the Cloak and Dagger?

by E. Macer-Story

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THE ESPionage scene is tricky. Just when the would-be investigator becomes absolutely sure that now it's all nailed down—as KGB or CIA or UFO or MIB—events are likely to take an unexpected turn, and flip the data into a much different context. This is part of the nature of investigations into the paranormal. When events are paranormal, they are paranormal. This seems to include both data, such as pictures, tapes and eye-witness accounts, and the process of investigating both sites and people related to the events.

Oddities also occur in investigating situations wherein ESP and/or mind control may have been in use as advanced techniques of espionage. As in ancient, cautionary tales about the sorcerer's apprentice, when the forces latent in the unconscious psyche are tapped via deliberate mind control, they unleash unexpected ESP and PK effects not necessarily related to the purpose of the espionage.

I have grown increasingly aware, as I am further exposed to media preconceptions about UFOs, that important areas of ambiguity may not make it into print simply because there is a natural desire on the part of reporters and witnesses to seem tight, sane and coherent even when events are neither tight, nor sane, nor coherent.

Recently I was drawn into a series of happenings which I imperfectly understand. But each aspect of the circumstances which I will narrate has been witnessed by other individuals and/or recorded on tape. In this I have been fortunate, for oftentimes the naive investigator, like the absent-minded professor, is left high and dry after experiencing strange ESP behavior, without a witness to any unusual interference with his or her activities. I encourage everyone who is doing serious research into ESP and the paranormal to equip themselves

with adequate recording equipment and start learning enough about mind-control techniques so as to be able to reverse mind-control monitoring, should it occur.

Contact

In the spring of 1982 I was telephoned by a lady who claimed to know one of my psychic clients and certain individuals connected with the Theosophical Society. She told me that she did not have enough money to pay for a psychic reading, but would I drop by? She wanted to meet me. A sucker for elderly ladies with no money, I decided to drop by her Greenwich Village apartment.

As soon as I was ensconced in one of the living room chairs, she started to bombard me with pictures and information about her past, and about psychic and theatrical activities including (to my amazement) British rock singers! Some old people get on similar kicks quite regularly, so I did not at first think her behavior unusual, although it was noticeably aggressive. Then I began to realize that Grandma wanted to touch my shoulders and forearms and kiss me on the cheek.* I was also experiencing a slight alteration of consciousness and probably slipping into a mild alpha state. Could the woman be trying to . . . seduce me? After all, this was Greenwich Village! But no, there were no moves in that direction. Then what on earth could she be up to? As soon as I became aware that her aggressiveness was deliberate, I remembered a lecture by hypnotist Max Toth† on recent research into hypnotic induction by touch. He had demonstrated that it was possible to

*As described in 1924 by K. I. Platonov, Congress of Psychoneurology, Petrograd (now Leningrad).

†Author of *Pyramid Prophecies*, Warner Books, 1979. See his page 3.

induct a person by touching and rubbing the forearms and/or by massage.

The reason this technique works (assuming the subject is compliant and has not heard a series of lectures on witchcraft and voodoo techniques) is that sensory mechanisms located in the hands, forearms and face are commonly used to perform information-connected signaling, such as typing this article, smiling, or patting a pet turtle.

Usually it is not possible to hypnotize a person without tacit consent, even if consent is simply the misguided and trusting belief that the wolf is grandma in a fur stole, or that one's mind is more powerful than the hypnotist's. I was not overconfident about Grandma. My first thought was to run. Instead, I told her that I had to get to the post office. With this personal objective firmly in mind, I was able to blank out all suggestions that I was personally involved with Grandma's background material of pictures and pseudo-theosophical commentary. But Grandma got into her coat and followed me to the post office—perhaps under the impression that I was in a state of naive consent. There she stuck close to my elbow, read the addresses on my mail, and tried to find out all she could about my social schedule for the week. The only event to be wormed out of me—which she did attend though I skipped it—was the reading of a play by an obscure group on West 46th street. She put herself on the group's mailing list and phoned the day following the event to give me a detailed rundown on how things went and how much I resembled one of the actresses. This was to be a constant theme: the switch in my roles from writer and thinker to "performer." She continually told me how beautiful she thought I was, and began to discuss Reichian theories.

I correspond regularly with my penpal Miloz in Poland. He is a keen student of psychic theory. Since Grandma volunteered to introduce me socially to a Polish film director, I began to suspect that someone was opening my mail. My last letter from Miloz, stamped with the Polish censor's number and "passed," offered confirmation, not consolation.

In 1979 Miloz had sent me photocopies of UFO sightings reported via

Tass in some Polish newspapers. I filed them as background material. After Grandma's conversation had reminded me, I looked into the file to retrieve the articles. The photocopies were there, but the tape of the Polish-English translation was gone. As if this were not enough to unsettle me, after I had made phone calls to several people to report the translation missing, the tape turned up again on top of a stack of clippings in my in/out file.

Under the Wheels

Now what? I phoned my colleague Harry Lebelson, with whom I have often discussed the possibilities of ESPionage; he once copied a magazine article on the ESPionage conditioning of the actress Candy Jones for me to read. I imparted the rather incredible suspicion that I had been contacted by a sixty-five-year-old female agent who was trying to induct me into compliance. Others might have laughed and told me to go get a few drinks and if that didn't help, then fly to Poland for a vacation. But Harry knew that I had never before voiced such a claim—never during the four years of our association; and he knew that I'd read the Candy Jones magazine piece only because he brought it to my attention and he remembered my skeptical comments about it.

We agreed on a time to meet at the downstairs coffee shop in the Port Authority bus terminal. A few minutes after we had gotten our coffee and sat down at a wall table amid a scattering of people, I noticed that a male Oriental, of age about 35, was seated next to Harry at the table to our right along the wall; he was listening to our conversation.

Having never been in quite that kind of situation before, except when I played a waitress in an absurdist farce in summer stock—I did not think to pretend that all was ordinary. I looked at the Oriental directly and passed a note to Harry. When Harry indicated that he was also aware of the uninvited listener, we kept our conversation going with generalities and, unlike the absurdist waitress, I continued to look directly at the man while projecting mentally the idea that I was reversing the monitoring situation.

After about ten minutes of this mutual hyper-awareness, the Oriental became visibly agitated and left the coffee shop at almost a run. Shortly afterward, another man—a Caucasian—entered and sat down a few tables away, and he also seemed to be auditing our conversation. We left the coffee shop.

Who would go to all this trouble? Within forty-eight hours I had been monitored by a sixty-five-year-old

female, a thirty-five-year-old male Oriental, and a heavy-set bearded male of about forty whose appearance and demeanor suggested an Eastern European origin.

Subsequent to the events I have narrated there came back to mind similar incidents which I had all but forgotten. For example, in 1979, at the time that Art Gatti's article on UFO information-suppression was on the newsstands, I had phoned Art and, after a minor blat, I reached not the author but a person who answered the phone in a language which could have been any one of a number of European languages I do not understand. I spoke to this person in English and asked him who he was. After an interval, an authoritative male voice told me in perfect English to hang up the phone and dial again. I had told Art of this incident, but it did not seem important at the time.

Decoy Duck?

Was this an organized surveillance? What would be its purpose? Was I being monitored because of my ESP gift and ability to predict terrorist activities? Grandma asked several times about my publicly acknowledged prediction of the 1981 presidential assassination attempt; also whether I predicted other such attempts upon the lives of the world's leaders (which I do).

Another reason for all the attention being given me could be that I was considered intellectually naive; it is a common mythology among psychological researchers that psychics are "left brain" people and therefore subject to the emotional manipulation necessary to the conditioning of a decoy or surrogate for ESPionage activities. As Grandma had wasted little time listing herself with the small theater company I mentioned to her, so she could have learned—if I had not detected her intentions—exactly what contacts I had and where key psychics and psychological researchers were located.

Why It Didn't Work

It was evident from Grandma's approach that my correspondence with the Mobius Group (a small, eccentric research organization based in Los Angeles) had been monitored either by inspection of letters or by word of mouth. Although persons

EUGENIA MACER-STORY is one of six psychics who "with chilling accuracy, predicted the March 30, 1981 assassination attempt on President Ronald Reagan," according to the *National Enquirer*. The mass-circulation tabloid devoted a full page to interviews with the six psychics in its issue of April 21, three weeks after John Hinckley committed his despicable act.

"... Eugenia Macer-Story of Hoboken, N.J., foresaw the shooting with stunning accuracy in January," the *Enquirer* said in its story over the byline of William Newcott. "She immediately filed her prediction with The Mobius Group, a leading parapsychology research organization," the article said.

"In an exclusive *Enquirer* interview, Macer-Story recalled she had felt danger for Reagan since a few days before he was elected," the newspaper continued, quoting: "Then, before he was inaugurated, I sensed more details. I saw Reagan walking out of a Washington hotel, in an area with brownstone houses. I saw he would be the target of an assailant who carried a handgun, and the attempt would come early in Reagan's term. I could also clearly see details of the gunman. He was someone with intellectual capabilities, the son of a well-to-do family."

Brando Crespi, described by the *Enquirer* as a director of The Mobius Group, offered the following comments when the newspaper asked him to verify Macer-Story's prediction:

"Although her prediction was made days before Reagan even was inaugurated, she was able to pinpoint the weapon, the description of the shooting site, even details of the assailant, including aspects of his family life.

"The specific points were just deadly accurate. The President was shot with a .22 handgun just outside the Washington Hilton, in an area with many brownstone buildings. And the shooting did take place early in Reagan's term, on the 70th day."

The *Enquirer* emphasized that all six of the psychic predictions it quoted were well-substantiated, noting that four had been aired by radio stations it named in California, Colorado, New Hampshire and Virginia, at various times from several months to a few days before the March 30, 1981 shooting. A fifth prediction was contained in a letter to the *Enquirer*, reportedly signed by the psychic in the presence of a notary public and dated November 14, 1980.

None of the predictions attributed to the other psychics was at variance with Macer-Story's prediction, and hers was by far the most detailed of the six.

unfamiliar with my motivations did not realize it, my letters to the Mobius Group about aspects of ESP were a deliberate kidding of analyst David Keith who had expressed an interest in "black magick" and other occult systems. It is a tacit policy of practicing occultists not to write down their actual methods and procedures for research groups. I was honoring tradition by telling Keith outrageous opinions and procedures which, although poetic in certain instances, are certainly not the actual *modus operandi* of my work. As in a British mystery novel, I had heard comical comments from Grandma which had to be based on the outrageous material I had sent to Keith. It became apparent early in the game that use of the material sent to the Mobius Group was an attempt to "gain my confidence." Grandma showed me pictures of places and individuals, all among those mentioned, and she chattered at length about her own close relationship with them. It was an amazingly complete scenario; some of it was laid in California and some in Egypt. A similar effect could result if you had just seen an Agatha Christie mystery and then dropped in on an acquaintance who began to relate details about her travels and adventures, and after a few minutes you realized she was simply relating the Christie plot back, in slightly altered form. Amusing? Yes. Threatening? No. But I was nonetheless motivated to phone actress Jackie Beech who had been with the USO in West Germany, to ask if she had experienced any monitoring or gossip about monitoring, during her stint with the touring theater in Europe.

Grand Opera?

Jackie—after initially becoming agitated and telling me to break off communications with Grandma immediately, and not fool around—told me that she knew of a mature woman member of one of the German opera companies who had mysteriously disappeared after claiming that certain sections of the book *The Odessa File* were true, and that the trucks marked as containing opera scenery were being used to transport plutonium. Though I doubted the plutonium, I began to see a pattern linking theatrical settings and ESPionage. I took Jackie's advice and have

not seen Grandma since, nor will her name be mentioned here.

The woman who vanished in Germany, an American citizen and formerly a teacher, is gone; friends in Germany were told that she was mentally unwell and had committed herself to a private institution.

ESP Weapons Tests?

In a taped conversation with Louis Acker—a psychotronics theorist who has experienced what he claims is the thwarting of research activities by agents—it evolved that he too has been contacted by Grandma. (When I asked Grandma about Acker, she told me he was "crazy as a crane.")

No, he is not crazy. Several of Acker's personal friends have told me that he has real-time memory lapses like the proverbial absent-minded professor, but he is certainly not as crazy as a crane.

It is worth noting that Acker was the second husband of psychologist Marcia Moore, who wrote about her experiments with the consciousness-altering drug, ketamine. Ms. Moore vanished several years ago, and what is purported to be a fragment of her jaw was recently found in the northwest area of the U.S. It is not certain where the rest of her remains might be located. At the time of her death, she was not married to Acker—which may be one of the reasons we have Louis Acker alive today. What did Ms. Moore discover about the psychic research underground?

The paper which Acker showed to me, on the possible use of crystal mechanisms as a means of energy-transduction, makes speculative technical sense. It concerns the relationship between the electrical modes we recognize under the blanket label of "electromagnetism" and non-electrical modes of information-transfer, such as may be coded in patternings related to ESP.

The New York Times of June 30, 1982, carried an article about Dr. Thomas Westerman of Shrewsbury, New Jersey, who has devised a way to detect consciousness-altering drugs in the human body with a machine which registers electrical changes in the skin.

At the time I did my psychic probe on the disappearance of Marcia Moore, her skull fragment had not yet been found, but through ESP

I perceived that she had been murdered and her body dismembered by persons involved with clandestine research into the electrical control of consciousness.

Since Ms. Moore was known to be experimenting with consciousness-altering substances, it now seems quite plausible that persons working with the electrical manipulation of such changes in consciousness might have approached her.

Mind Control

After I had told Louis Acker that I felt his work might be inhibited by a "spell" (i.e., directed hypnotic ESP at a distance) and had described via my own ESP the location of the suspected attempt to block his research, he was able to drive me to the exact spot I had described. He went on to tell me about the car failure he had experienced near a small bridge I had perceived while concentrating. Various aspects of this realization were witnessed by Acker's grown nephew, William.

Several American psychotronic researchers, notably Thomas Bearden and Robert Beck, have claimed that mind-control techniques have been directed against their activities by agents of a foreign power. It's easy to giggle over a drink and call Beck and Bearden paranoid; easier still to agree that the reason my ESP took me to mental bolexing of Acker at the bridge was because his research was "interfered with" only by a simple, chance car-failure. But what about the people at the Port Authority coffee shop who were listening to me tell Harry Lebelson about Grandma's machinations?

Paranoia?

There is no way Grandma could have thought I held the mythological beliefs she described unless someone had passed along the material I wrote to Dave Keith at the Mobius Group. Chances of this mythos occurring randomly are slim indeed.

It should be noted that Grandma is smart. She has both PSI ability and acting talent. Having observed her lifestyle and having heard her tell about trips "abroad," I suspect she was only pretending that she didn't have enough money to pay for an initial psychic reading; under a pretext I was able to "borrow" several hun-

dred dollars (which I repaid at the conclusion of the test). She handed it over as if it were ten bucks kept in her teapot. Is such ready money a part of the new-age methodology of subversion?

In the article on the conditioning of Candy Jones—which came to my attention before I met Grandma—the author assumed that the intelligence agency that used Ms. Jones was the CIA. In a classic “either/or” mistake, many people who have detected ESPionage have assumed that the perpetrators must be U.S. or Soviet

intelligence agencies. But, in its issue of May 17, 1982, the *New York Post* said that personages such as Nelson Rockefeller and Richard Nixon were aware that *anti*-Soviet intelligence agents had been imported into the U.S. by State Department officials who intended to use their skills in intelligence work directed against the Soviet bloc.

Could it be that some of these people—versed in the use of occult techniques—are now loose within the “small cults” and “psychic research” monitoring field where they

are being used, or worse, also being used to train younger agents?

Do we have dangerous mercenaries running around using mind-control techniques without any sane perspective on the assorted countries they might be representing?

ACKNOWLEDGMENT

Special thanks to Harry Lebelson, both for his canny observations of intelligence monitoring—and for asking me in 1980 to do a psychic probe on the possible whereabouts of Marcia Moore.

Parapsychology in China

Can some people read another person's mind at a distance? Manipulate objects without touching them in any way? Sense colors or shapes through their hands or feet or ears? The possible existence of paranormal powers was first raised among European scientists more than a century ago. Over the past two years the question has been hotly debated in China.

On March 11, 1979, the *Sichuan Daily* published an article about 12-year-old Tang Yu from Dazhu County, Sichuan Province, who claimed to be able to read written material with his ears. Soon similar cases were being reported from other parts of the country, and scientists, medical experts and educators began to give their opinions.

The *People's Daily*, in May 1979, was the first to criticize the “ears can read” report as ridiculous and unscientific. It also carried a piece by a distinguished educator who dismissed the claims as sheer fantasy not worth refuting. The newspaper followed up by carrying a report from the Sichuan Medical College that Tang Yu was simply playing tricks like a magician, and the issue seemed about to die.

But many people who had seen demonstrations were not convinced. They preferred to believe what they saw with their own eyes, and did not think a boy so young could fool them so cleverly. People kept uncovering phenomena which they claimed could not be explained by present-day science, and reports continued to be published.

In August 1980 a forum on parapsychology was sponsored in Shanghai by the monthly journal *Nature*. Participants came from over 20 colleges, medical and scientific research institutions. Twelve children claimed to have paranormal powers and gave demonstrations of “reading” letters or figures with their hands, feet, ears, noses, and even armpits. A number of observers took the demonstrations very seriously. A few colleges and universities established research groups on the subject. Some scientists considered that a major breakthrough had been made, and preparations got underway to establish a National Society of Human Body Science.

The January 1981 issue of *China Reconstructs* reported on the debate. It carried an article citing the interest in paranormal phenomena, but also expressing the skepticism many people still felt about the authenticity of many of the demonstrations.

In May 1981 a second forum on the subject was held in Chongqing, Sichuan Province. Some scientists made presentations linking paranormal powers with the theoretical basis of traditional Chinese medicine, and argued that such powers were no mystery, but part of an advanced scientific understanding of the functions of the human body. Reports were given on what were stated to be cases of mind-reading at a distance, of seeing through solid objects, and of remote control of another person's actions.

Nevertheless, a number of scientists continued to express doubts, calling parapsychology a pseudoscience. They pointed out that the evidence of one's own eyes is not necessarily true without further investigation and analysis, and that some people are rather gullible and easily duped.

In October 1981 the State Science Commission set up a special group to study the phenomena. The group undertook detailed investigations of the claims conducted under scientific conditions and began to issue materials, including reports showing that many of the cases were based on deception.

The Chinese Academy of Sciences sponsored a public hearing in February of this year. The reported cases were analyzed, and the great majority of them shown to be unfounded. Credulous belief in paranormal powers was criticized. The day after the hearing, February 25, *People's Daily* summarized the criticisms made, reviewed the news coverage of the past several years, and said that in its opinion there was no solid evidence for the existence of paranormal powers. Nevertheless, the debate goes on in scientific and lay circles, and experimentation continues regarding what has become a highly emotional issue.

—From *China Reconstructs* magazine, June 1982

The Origins of Lemuria

Part II

by Jon Douglas Singer, M.A.

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IN PART I, I discussed the traditional location for Lemuria in the middle of the Pacific. I concluded that since most geologists and archeologists refute the evidence for Mu or Lemuria, we must look elsewhere or else dismiss the entire idea of a recently submerged mid-Pacific continent and its fabulously ancient civilization. The only evidence for the latter is the sunken city found by Dr. Robert Menzies, and the cement cylinders buried in ancient mounds on New Caledonia Island. The ruins on Easter Island in Polynesia and Ponape in Micronesia are ruins of structures built by ancestors of the present-day populations and are not the ruins of lost civilizations from Mu.

Some of the archeological mysteries in South America and Mexico and some in California have been cited as evidence for Lemurian colonization of those lands. Besides ruins, there are ancient legends about lost islands which may reflect traditions of Mu, handed down through the ages. There is certainly geological evidence for widespread submergence of land along the west coast of the Americas at the end of the last Ice Age when the glaciers melted and the sea level rose.

Lemuria and South America

In South America many ancient civilizations flourished but apparently none were as old as Mu. There is Menzies' nameless ruin mentioned earlier. On dry land, near Lake Titicaca in Bolivia, is the famous ancient city of Tiahuanaco perched high in the Andes. Arthur Poznansky, an Austrian engineer turned archeologist, calculated the age of the city by aligning its buildings with various starting positions at different epochs. He thought that Tiahuanaco was built as early as 9000 B.C., perhaps earlier. He did not refer to Mu or Lemuria, but he did suggest that the city was the source of ancient South American civilization.¹ However, Poznansky's date of 9000 B.C. has been greatly advanced by carbon-14 dating to A.D. 600. Tiahuanaco is therefore not a colony of Mu.²

While it appears that there is no evidence favorable to the old idea of Lemurian colonists at Tiahuanaco, there is another city nearby which may be extremely ancient. It is a fascinating place because the ruins are under water, in Lake Titicaca. The sunken city was discovered in 1955. William Mardof, an ex-Marine turned skin diver, photographed ruins at 95 feet beneath the lake's surface. Brad Steiger, describing the city, gave no details about the size of the ruins. He speculated that the submerged city might have been a seaport. Steiger claimed that massive docks had been found in the Titicaca region but gave no details about their age or the culture to which they might have belonged.³

Mardof's city, or an adjacent one, was studied by an expedition organized by the Argentinian Diving Federation. They found ruins 200 meters from the lakeside. The

ruins extended for one kilometer and included 30 walls placed in parallel rows. There was a broad pavement of several hundred square meters.⁴

Russian writer Alexander Kondratov was unable to explain why the ruins sank, and he did not know how old they were. It appears that Lake Titicaca once connected to the ocean, and marine animals are still found in it. But it seems most unlikely that the drowned city dates to Tertiary times, when Lake Titicaca was an arm of the Pacific, long before the time of man. It is more likely that the city sank into Lake Titicaca in relatively recent, albeit pre-Columbian times, during an earthquake.

The sunken cities of Bolivia may or may not be part of Mu or its colonies. More evidential is another submerged ruin allegedly found off Guayaquil, Ecuador. A British writer, Harold T. Wilkins, was in Santa Fe de Bogota in Colombia just before World War II. He met one Senor Munoz, a wealthy estate-owner who lived near Guayaquil. Munoz had hired a diver to fish-up artifacts from an ancient sunken city located off the seashore adjacent to Munoz's estate. The diver had come up with some truly remarkable works of art: statuettes with Egyptian hairstyles and other statuettes with facial features bearing a strong resemblance to Aryans, Semites and Japanese.⁵ On the statuettes' chests were jewels carved in stone; other carvings were pornographic.

Besides statuettes, the diver had recovered seals like prisms, graven with hieroglyphs, and convex lenses and reflectors made of obsidian. According to Munoz, the lenses indicated a strong possibility that the ancient users were scientifically advanced, especially in astronomy.

There are no photographs of Munoz's fantastic artifacts and we have only his and author Wilkins' word that the city off Guayaquil even existed. Wilkins conceded that there was no clue to the lost city's age; he sought to establish a link to Rutas, the lost continent first discussed by Jacolliot. Wilkins thought that the Rutas tale was taught in the holy schools or *goparams* of India, but he didn't say which *goparams*.⁶

Mu and Mexico

The link between Mu and Mexico is one of the more exciting possibilities this research has suggested. If Mu ever existed, it would be almost impossible to excavate as proof, a sunken city thousands of feet below the vast waters of the Pacific Ocean. The discovery of an incredibly ancient pre-Olmec city in Mexico on dry land would not only revolutionize archeology but would also provide a clear signpost on the road leading to proof for Mu. Furthermore, a ruined city on dry land would be somewhat easier to excavate!

In 1891 William Niven, a mineralogist of Scottish origin, found a ruined city near Guanajvato, Mexico, in the state of Guerrero, in the western part of the country.⁷

The city was called Omitlan and it yielded many interesting remains of a pre-Aztec culture. Guerrero has remained important to archeologists as a place of study because some significant Olmec sites belonging to Mexico's first megalithic civilization have been found there. The Olmec sites date to 1000 B.C. or a little later.⁸

After working at Omitlan, Niven found another site of an even more interesting civilization in the Valley of Mexico in 1911. Niven excavated the buried city and nearby sites in the succeeding years. Col. James Churchward heard of Niven's discovery and referred to it in his books on Mu.⁹ Indeed, it was while reading Churchward's books that I first learned of Niven. I dismissed the story as a hoax until 1974, when I found a separate but tantalizingly brief account of Niven's Valley of Mexico sites in *Who's Who in America, 1918-1919*.¹⁰

Churchward said that Niven was attracted to an area of clay pits between Texcoco and Haluepantla in central Mexico. The pits were a source of building material for Mexico City. As Niven studied an area 200 miles long and 10 miles wide, traces of two civilizations were uncovered by the diggers: First, there was a foot of earth. Next, nine feet of boulders, sand, and gravel with potsherds. At the bottom of the nine-foot layer was a pavement, indicative of an advanced civilization. Under that was a sterile layer six feet in depth with no artifacts, only gravel, sand, and small boulders. Beneath that was a second pavement and underneath, a 14-foot-deep layer of gravel, sand, and small boulders. Finally, at the great depth of 31 feet, a city set atop a third pavement was found, its ruination explained by a heavy cover of volcanic ash. It appears that Niven had found the Pompeii of ancient Mexico.

Among Niven's significant discoveries in the buried city was a doorway with a semi-circular lintel—a doorway unlike other ancient Mexican doorways then known. It had a true arch, and to counter the conventional wisdom that curved arches were unknown to the builders of pre-Columbian Mexico was the door which had been of wood and had petrified *in situ*.

Niven dug into a room which was 30 feet square. He found many artifacts and countless human bones. Also in the room were the remnants of a goldsmith's shop, with wall paintings in red, yellow, blue, green, and black. Bits of gold were found, as were statuettes apparently used as models, and molds for goldwork and jewelry. The artifacts were unlike those of later Mexican cultures. Beneath the room was a tomb with hundreds of clay images and dishes. One grisly feature of the tomb was a male skull-fragment with the hammered-copper ax which had slain the victim still embedded. Other artifacts were statuettes with Semitic and Chinese features.

Niven also found hundreds of curious tablets which Churchward claimed were Lemurian inscriptions. They were Churchward's second source of information about Mu.

Churchward's first-line evidence of Mu, and his chief source, were the so-called Naacal tablets allegedly found by the colonel in an unnamed Himalayan monastery. Churchward worked with an anonymous high priest as his assistant in a famine-relief program in an unidentified part of India. Churchward was studying a wall carving one day when the priest, who was an archeology buff, told the explorer about ancient tablets in the basement of

the temple. Churchward claimed that after studying the language for over two years, he learned that the tablets had been brought to the Himalayas by priests called Naacals who were originally from Mu.

As far as I know, the Naacal tablets have never been found and verified by independent investigators. There is some evidence that Niven's tablets may be real. I have seen some of Niven's artifacts from Omitlan in the American Museum of Natural History in New York City through the courtesy of Dr. Gordon Ekholm, an anthropologist who specializes in Mexican archeology. Whatever the age of Niven's artifacts, it seems unlikely they are Lemurian. An article in the *Literary Digest* of July 12, 1924¹¹ relates that Niven found hundreds of stone tablets at a depth between 10 and 25 feet; there was "writing" on each side of the five-sided stones. By dating the age of the lava streams which had buried the stones, Niven and his colleague, Dr. J. H. Cornyn, concluded that the tablets were between 10,000 and 7,000 years old. This was before radiocarbon dating came into use, so we cannot accept the Niven/Cornyn chronology until someone returns to the site and digs up more tablets. If the chronology should be verified, it would be powerful evidence of a civilization that flourished 6,000 years before the Olmecs who have long held the record as the oldest known civilization in Mexico.

When I was a student in his course on the occult at New York University, Vincent Ragone, a well-known psychic, recommended a book entitled *Mu Revealed* by Tony Earll. Earll claimed that a modern archeological expedition led by a Prof. Reesdon Hurdlop had not only rediscovered Niven's ruins but had found new proof of Mu, such as artifacts and scrolls dating to 22,000 years ago.¹²

Before he excavated the ruins of Niven's buried city, Hurdlop had supposedly excavated at the ruined city of Johore Lama, a medieval site near Singapore. The 1959 edition of the *Encyclopedia Britannica* mentioned the excavations of Johore Lama but made no mention of Hurdlop. Prof. Hurdlop claimed to be a member of the Marquina-Jolicoeur Institute in London, but a search through London telephone books and directories of archeological societies around the world has failed to reveal any trace of Hurdlop or his institute.

Nonetheless, some people still believed that Hurdlop had found a ruined city dating to 22,000 years ago. He reported finding 69 scrolls which, when deciphered by a Dr. Edward Stitch of Boston, recounted the life-history of Kland, a Lemurian priest. Many details of Kland's life and Lemuria's culture, however, did not match Churchward's account of Mu. There was a map showing the provinces and cities of Mu, details which Churchward did not include. Churchward's map of Mu shows only one city, Hiryanapura, on the west coast of the lost continent. Hiryanapura, by the way, is mentioned in Hindu mythology, in books such as the *Vishnu Purana*.

Fate magazine ran a detailed expose of *Mu Revealed* in its August 1975 issue. Three anthropologists, Robert Wicks, R. E. Grengo of the anthropology department at the University of Washington in Seattle, and Edmund S. Meltzer of the Near East studies department of the University of Toronto, all debunked Tony Earll's book. None could find any trace of Hurdlop or his assistants, nor any trace of an article in *Science Digest* magazine

which supposedly gave the details of the excavations and the decipherment of the scrolls. Though agreeing that Niven's finds were real and poorly understood, they concluded that *Mu Revealed* was probably a hoax.¹³

A final note on Tony Earll can be found in Peter Tompkins' *Mysteries of the Mexican Pyramids*. Tompkins said that "Tony Earll" is really a pseudonym for Canadian occultist Dr. Raymond Buckland who lives in Weirs Beach, New Hampshire; Reesdon Hurdlop is an anagram for "Rudolph Rednose"! Tompkins agreed that Niven's discoveries were real, but he asserted that the Churchward account of Mu was probably as fictitious as Earll's.¹⁴

An epilogue to the story of Niven's enigmatic tablets was written in January 1978 by archeologist Vance Cooper who described some strange artifacts she found in 1964.¹⁵ She was at that time driving between Tlalnepantla and Atizapan, Mexico, when she stopped at the Ascencio Alvarez ranch for water. In the yard she spotted odd granite slabs with petroglyphs, and when Senor Alvarez returned home he was startled to find her carefully scrutinizing them. Cooper explained that she was an archeologist. Alvarez said he was storing the slabs for a friend and didn't wish to sell any, but he allowed Dr. Cooper to take photographs of them.

Cooper went on her way, but when she returned the next week she was told that the police had taken the slabs to the Mexico City Museum. The police, however, denied having the stones, and other archeologists didn't even know about them. Cooper's colleagues speculated that they could be fakes, since faking artifacts is a big business in Mexico. In the April 1978 issue of *Fate* magazine no fewer than nine letters from readers were printed which stated that the artifacts found by Cooper were probably identical to Niven's tablets. Cooper replied by denying she had ever heard of Niven or of Churchward.

One other mysterious ruined city deserves at least passing mention before we turn our attention from Mexico. Harold Wilkins wrote that he met a William Taylor of Seattle, Washington, in 1945, and that Taylor had heard a strange story while working on an engineering project in Georgia in 1902. An unnamed explorer told of having seen the ruins of a great city in a remote valley surrounded by nearly unscaleable cliffs. He said that several other expeditions had previously tried to reach the ruined city but had failed because of the remoteness of the region and its hostile, rugged nature. The explorer didn't go all the way down into the valley but left it when he reached the cliffs above the city; he saw a large number of stone buildings apparently tumbled by an earthquake. The explorer's comrade went down into the valley to study the area but he was overcome by exhaustion and quit the expedition. The name of the expedition's leader and the location of the city are unknown. The account must be considered folklore until further details are revealed by more research.¹⁶

Mu and the West Coast

The western coast of North America also has its share of archeological mysteries which orthodox archeologists haven't been able to explain and which haven't been

adequately studied. Some of these ruins and artifacts have been linked to Lemuria.

For example, Death Valley has several legends about lost cities. A book entitled *Timeless Earth*¹⁷ is a compendium of archeological mysteries; it contains an odd, probably fictitious account of a ruin found by William Walker, an adventurous Californian who "conquered" Nicaragua for a brief time.

In 1850, Walker was in Death Valley and came upon a vast ruined city that extended for a mile. In the city's midst was a rocky knoll about 30 feet high. On the knoll was a huge structure, apparently a palace or temple of some sort. The stones of which the building was constructed had been affected by a great eruption. The Indians had no legends about the ruins and regarded them with terror.

I had never heard of ruined cities in California, so I tried to follow up author Peter Kolosimo's fascinating account, which was in direct quotes presumably taken from a journal kept by Walker. Kolosimo didn't cite the source of the story, so I studied several books about Walker's life which were in the Bobst Library collection at NYU. None of them mentioned the nameless dead city. My brother, Hollywood filmwriter Bruce Singer, was also doing research on Walker's life in preparation for a movie script, independent of my research. He found no evidence of Walker's ruined city, and I must conclude, at least for now, that Kolosimo's story is a fabrication.

Somewhat more gratifying to the researcher is the Piute Indian legend about a subterranean city named Shin-au-av. In the 1920s an Indian guide named Tom Wilson claimed that his grandfather had rediscovered the city while exploring caverns which extended several miles. The old man said the city's inhabitants spoke an unknown language and wore leather clothes. Later, a prospector named White supposedly fell through the floor of an abandoned mine and found a tunnel with mummies clothed in leather; around the mummies were stacks of gold bars!

Within the past few years researchers of anomalous antiquities have begun scientific examination of the odd, rambling stone walls that are to be found in the hills around California's Berkeley campus and farther south, east of Milipitas.¹⁸

Sibley Morrill wrote that the Berkeley walls are found in forested or chaparral-covered areas. Only sections survive, some only 20 feet in length, others extending to 200 feet. Their height ranges between two and five feet. Most are three to four feet high and four feet wide. There is evidence that in places the walls were somewhat higher.

At most sites the walls were probably not used for defense, although Morrill mentions at least two walls at Vollmer and Grizzly Peaks which could have been forts. A wall at Roundtop Hill is 100 yards long, and Morrill thought that was too great a length for a fortification. The rocks used in its construction were boulders weighing about 200 pounds; they were not simply piled atop each other but were chipped and fitted into place with great skill.

Morrill wrote that Seth Simpson of Oakland, California, found that the walls in the Oakland Hills cover seven miles of territory. They do not match modern or old

(Continued on page 92)



SITUATIONS

In this section, mostly contemporary curious and unexplained events are reported. Members are urged to send in newsclippings and reports they deem responsible. Please be sure to include the source of reference (name of newspaper or periodical), city of publication, date of issue in which article appeared, and your first initial and last name (or membership number only, if you prefer to be credited in that way).

'Abominable Flowman'

In Buena Park, Calif., more than 200 frightened residents phoned police on the night of May 22 to report that an 8-foot-tall, manlike creature was roaming about in the city's sewer system. Only one of about 100 believers who attended a "monster watch" the next night succeeded in finding traces of the supposed humanoid.

Dennis Ruminer and his partner, Tom Muzila, used divining rods to track the creature. The rods directed them to the opening of a roomy drainage tunnel. Ruminer waded inside and found a handprint. Continuing his search, he found "sets" of prints further along in the big pipe. Complained Ruminer:

"We were looking around the mouth of the tunnel when someone shouted, 'There's a track.' There were lots of people around, and as we went to look, a kid stepped on the track, so we saw only the front part of it. It was a humanoid foot with five big toe marks and about seven inches across the ball of the foot. Before we got a good, clear look at it, another kid stepped on it and completely obliterated the track."

Although the search produced little visible evidence of an "abominable flowman" in the municipal drainage system, Frank Missanelli, manager of an apartment building near the intake, claimed he heard the creature but did not see it. "It roared and growled just like the dinosaurs in the movies," he said.

Bennie Hinsley, 18, said he and his brother, Raymond, 16, saw the beast. "We could see the monster's shadow in the drainage ditch," Bennie said. "We heard the water splash and then we smelled something awful."

SOURCE: UPI in *St. Louis Post-Dispatch*, May 23, 1982. CREDIT: R. Nelke.

Grandma Power

In China, a 67-year-old grandmother wrestled an attacking leopard down a rocky hillside near Peking, and five children helped beat it to death.

"Whenever you are cornered,

the only way out is to fight," Qi Deying told a *China Daily* correspondent. The newspaper reported that Mrs. Qi grabbed the leopard by its ears and jammed its shoulder against its chin to keep it from biting her, and she and the animal rolled down a hillside, three times plunging from rocks. The children came to her aid and beat the leopard with branches.

In Georgia, U.S.A., a housewife in her late 50s lifted a 1964 Chevrolet Impala four inches in order to free her teenage son Tony, who was knocked out and pinned to the ground when the bumper jack slipped from the car he had been working under. Angela Cavello said that prayer gave her the power to perform "a miracle."

Even as her inspired muscles were doing the work of a tow-truck, she was unable to arouse her son. "I was kicking him, saying 'get out, get out,'" said Mrs. Cavello.

She managed to hold up the car long enough so that neighbors could right the jack and drag out the unconscious teenager. He was taken to a hospital and released after examining doctors found no serious injuries.

SOURCE: AP in *St. Louis Globe-Democrat*, April 14 and June 30, 1982. CREDIT: R. Nelke.

Mummy's Dirty Lungs

China's most ancient mummy—a 3,000-year-old blonde—had lungs dirtier than those of a modern coal miner with black lung disease.

The mummy was found in April 1980, in the Sinkiang region at the site of a long-vanished city called Lou Lan, famous in its day as a stop-over for the caravans that plied the "silk road" between China and the Middle East.

First estimates placed the mummy's age at 6,000 years. But carbon 14 dating indicated a true age of about 3,200 years. The body, in its shroud of coarse woolen cloth and goat skin, was taken from a 23-foot burial mound. The arid Sinkiang climate had kept her features and bone structure in a near-perfect state of preservation: the skin light

(Continued on page 74)

Bigfoot Breakthrough

It was a Monday, a day when most folks are back at work and U.S. Forest Service personnel tend to relax a bit after a weekend spent scolding early-season campers, finding lost children and family pets, stalking poachers, and putting out small fires in time to keep them from becoming big ones.

But Monday, June 14, was different. The phones kept ringing all day and well into the night in ranger stations throughout the Umatilla National Forest, a big piece of federal land that sprawls over much of the southeast corner of Washington state and many square miles in Oregon.

The telephoning wasn't about a forest fire or other emergency. The callers wanted to know whether "that guy in the Sunday papers" really saw Bigfoot, or was somebody playing games, or trying to sell something?

False reports of Sasquatch appearances are nothing new to Wayne
(Continued on next page)



Wayne Long of the U.S. Forest Service takes photo of one of many huge tracks found after a watershed patrolman had reported encountering a 9-foot-tall anomalous creature on Umatilla National Forest land, 25 miles southeast of Walla Walla, Washington, June 9.

AP wirephoto published in many newspapers during June 1982

Long, fire-management officer for the Walla Walla District of the USFS. He gets them all the time—mostly from youthful pranksters, middle-aged inebriates, and elderly persons whose vision is a bit cloudy even on clear days. Such calls are dealt with routinely and efficiently: the call is logged, the caller thanked, and no worry.

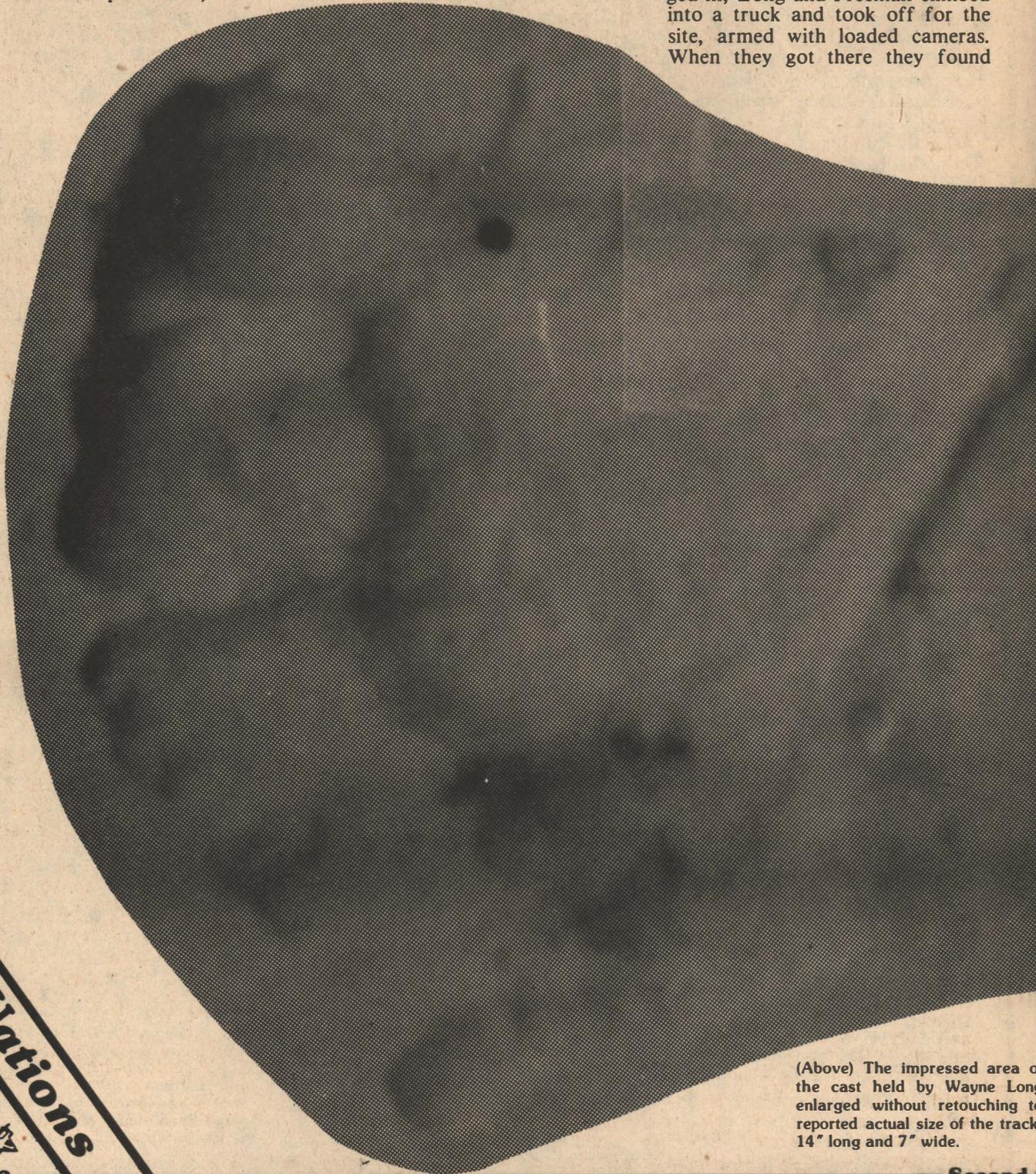
But Wayne Long had been worrying for almost five days—ever since Thursday, the 9th, when one of his watershed patrolmen, Paul

Freeman, told him of an encounter “with a 9-foot-tall creature,” on a logging road in dense timber. Freeman had said that from a distance of 50 to 75 yards, he and the creature looked at each other briefly, then both took off in opposite directions. The animal was reddish-brown and covered with hair, according to Freeman; it walked upright, but hunched over, and its forepaws hung down low. When Freeman realized the creature was

not coming after him, he stood and watched it disappear.

What worried Long wasn't the report so much as it was the public incredulity he'd have to face, the guffaws he'd hear if the story got out that a U.S. Forest Service employee was still loose after claiming he'd seen Bigfoot when nobody else had, and no way to prove the brief sighting wasn't just a case of hallucination or a hoax.

Shortly after the report was logged in, Long and Freeman climbed into a truck and took off for the site, armed with loaded cameras. When they got there they found



(Above) The impressed area of the cast held by Wayne Long, enlarged without retouching to reported actual size of the track, 14" long and 7" wide.

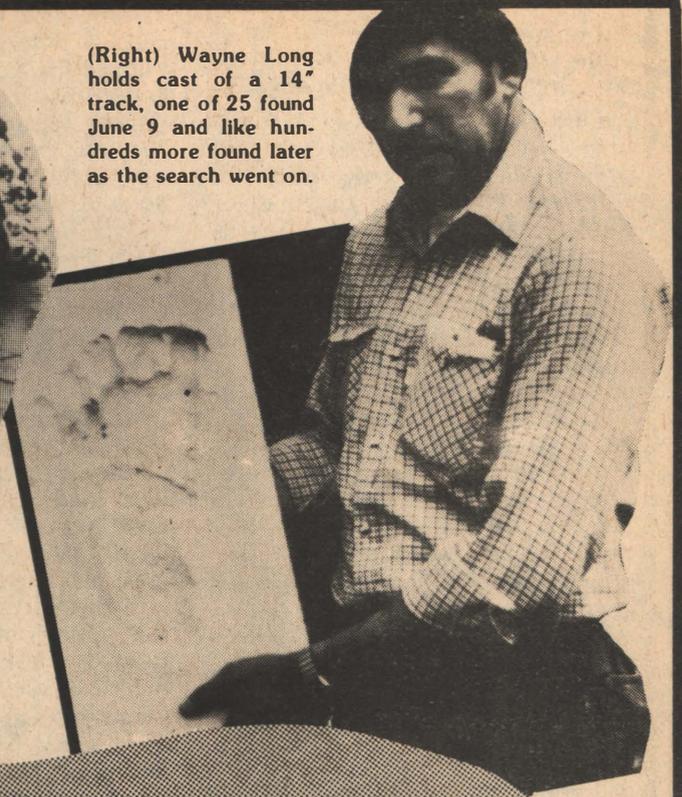
Situations





(Above) "The world's best track," says Jon Beckjord. "It was found on a different day, a week later, in a different place, very hard (and illegal) for anyone to get to in the watershed area."

(Right) Wayne Long holds cast of a 14" track, one of 25 found June 9 and like hundreds more found later as the search went on.



Photos © 1982 by Jon Beckjord

tracks all over the place, some clear and deep, others barely discernible, but all of similar size and shape. Neither of the two experienced foresters could identify the prints with any species of animal or human ever known or suspected, either in

the area or within their experience elsewhere.

The men took pictures and made casts. The clearest print they saved till last, filling it just to the brim with well-diluted plaster of paris to contrast with the brown of the surrounding earth. Then Long knelt and posed with his camera point-

ing at the print as Freeman clicked the shutter of his own camera. This was the photo that was seen around the world as satellite and wire transmissions buzzed it to the nation's newsrooms in time for Sunday distribution. (See photo, page 71.)

West coast SITU members tore up their newspapers and mailed off
(Continued on page 93)

reddish brown, eyelashes and eyebrows still discernible, internal organs well-preserved; even the scalp and the skin on the soles of the feet had a lively look. She was apparently about 40 years of age when she died.

Last year the body was flown to Shanghai for further study. An autopsy was performed, and according to scientists from the Shanghai Institute of Occupational Health, her lung tissue, though still elastic, showed the same type of deterioration as is routinely diagnosed in persons affected by years of exposure to coal dust.

SOURCES: AP in the *Courier-Post*, Camden, N.J., April 19, 1982 and *The Tennessean*, June 18, 1982. CREDITS: C. Michels and H. Holland.

Continental Crackup

Already there's a crack 1,700 miles long, extending from Washington state across the country through south-central Missouri to the southern tip of the Appalachians. Three times the length of the unpopular San Andreas Fault in California, the recently discovered crack is 90 miles across and descends deep into the Earth's crust.

No problem, however. Professor Raymond E. Arvidson, who discovered the crack, says it poses no danger and wouldn't even be noticed by someone standing on top of it. But it may help to explain some old mysteries about our planet.

Prof. Arvidson is the director of NASA's Regional Planetary Image Facility. He and a research team combined more than 600,000 gravitational figures with topographical data to produce a "simulated space view" of the United States. One day last fall they were inspecting the map when they noticed the formation since identified as the rift.

Arvidson says that the discovery may improve knowledge of how the continents were formed and how continents responded to stress between plates in the Earth's crust. As an example, he cited the New Madrid Fault, a "hot spot" where small earthquakes have persisted ever since the devastating New Madrid quakes of 170 years ago which changed the course of the Mississippi River and were felt as far away as Boston. "Arvidson's

crack" intersects with the New Madrid Fault, and further investigation may better explain the continuing seismic misbehavior which has long bothered residents in the six surrounding states. *(Editors' note: A special report to SITU on "Odd Luminosities (UFOs) and Other Fortean Events Before Earthquakes: The New Madrid Test" by Dr. Michael A. Persinger was published in Pursuit No. 54, Second Quarter 1981, pp. 68-79.)*

As to how the crack was formed, Prof. Arvidson speculates that it may have resulted from the collision of the European and North American land masses more than 200 million years ago—the same collision that produced the Appalachians. Or, it could be a scar burned into the Earth's crust as it rotated for millions of years around a stationary "hot spot" deep in the mantle of the Earth.

SOURCE: Charles Neale for AP, in the *Louisville, Ky., Courier-Journal*. CREDIT: H. Holland.

Big Cats Still Surviving?

A growing number of sightings by reliable observers suggest that the mountain lion, thought to be extinct in the eastern U.S. for more than a century, is alive and well in Virginia and North Carolina.

The mountain lion or cougar is the largest cat on the North American continent. It averages 160 lbs. and measures eight feet from nose to tail. Except for a dwindling population of 20 cougars known to be living in the Florida Everglades, the species was thought by most conservationists to have been hunted out of existence. "No cougar ever met a man with a gun that didn't take a shot at it," said Dr. Robert Downing of Clemson University, referring to pioneer days when an irrational fear of the big cats led settlers to place a bounty on them. The last documented cougar kill in Virginia was 150 years ago, he noted while discussing the difficulties of documenting recent sightings for the federal project he heads.

A well-witnessed sighting was reported last year by Dale Carter, a high school teacher who lives near Purgatory Mountain, Virginia. He claims that he, his wife and two teenage sons saw a cougar near their home "several times."

"He was in front of a tree-stump when the car lights hit him," said

Gloria Carter. "He ran toward the house, stopped at the front porch, crouched down and looked at us. We saw his bright yellow eyes glow, and he switched his tail at us."

"He had a long tail, and he loped into the bushes," said the Carters' older son. "He didn't run like a fox or deer."

Other recent sightings have been in Bedford and Botetourt counties. In May, a park ranger said he saw a mountain lion cross the Blue Ridge Parkway.

Clemson's Dr. Downing and "Cougar Joe" Coggin, a biologist who works for the State of Virginia, have been on a search of the mountains and swamps for almost a decade in hopes of finding evidence beyond the rash of sightings since 1970 that prompted the federal government to change the status of the Eastern cougar from extinct to endangered species.

Downing and Coggin believe that a few cougars escaped the pioneer hunters' purge and hid in the wilderness, far from civilization. They reason that the conservation programs of recent years which have brought the deer population to a record high level, also caused an increase in the number of mountain lions and so brought them again into contact with people.

"I hope to heck we can find one soon," said biologist Coggin.

SOURCE: John Witt for UPI in *The News and Observer*, Raleigh, N.C., June 6, 1982. CREDIT: P. Thompson.

Baby's Evolutionary Tail

The birth of a child with a tail is a rare glimpse of "the relationship between human beings and their primitive ancestors," said a Boston doctor as he described surgery he performed in May on a baby born with a slender, tapered, 2-inch-long tail.

Dr. Fred D. Ledley said the "well-formed caudal appendage" he removed was located on the baby's lower back near the end of the spine. It was covered by skin of normal texture and had a soft, fibrous consistency; it had hair and nerves but no bone or cartilage.

Similar cases have been reported throughout history, Dr. Ledley noted, but few have been documented during the latter part of this century.

SOURCE: AP in the *Courier-Post*, Camden, N.J., May 24, 1982. CREDIT: C. Michels.

Proposed Information Data Base For Unorthodox Energy Science

An Automated Information Retrieval System

by Thomas E. Bearden

AT PRESENT, it appears feasible to produce a "free energy" source by tapping several known and unlimited sources, such as zero-point energy of vacuum and the Dirac sea of negative energy electrons. While linear systems are prevented from doing this by the second law of thermodynamics, it appears that highly non-linear systems far from thermodynamic equilibrium are permitted to do so, by means of negentropy permitted in such systems according to the recent and profound work of Nobelian Ilya Prigogine. The thermodynamics of a system far from thermal equilibrium (a "Prigogine system") are quite different from the thermodynamics of the normal "linear" system. Indeed, the Lamb shift constitutes irrefutable proof that zero-point energy can be "tapped" to yield observable results; the lowly hydrogen atom has been doing it since the dawn of creation. Even as simple a device as two conducting plates can tap the quantal energy of vacuum by a calculable (and measurable) amount, according to theory and experiments that are already solidly in the scientific literature.

A rather large body of theory and experiments for such "unorthodox" aspects of science exist in the literature, little known and unexploited. Such unorthodox literature consists of both the "hard-core" and the "soft-core" literature, with an especially rich lode existing in the latter. However, this information is often obscure and even fleeting. Presently only a few Western researchers are cognizant of this information and its potential significance. Because the area is "unorthodox," it is not presently a "field" per se. Also, much of the information is fleeting—some is even proprietary. There is none of the conventional scientific support; there is no funding, either for researchers themselves or for journals and normal collation, abstracting, and library functions. Consequently, potentially very valuable and very rich scientific knowledge is allowed to lie fallow, and even to disappear. Sorely needed scientific inventions and innovations—such as cheap, nearly free energy sources—are not being developed, even though they are quite possible.

The few researchers now in the area have accumulated personal libraries of this extremely important material and information, at very substantial personal sacrifice in terms of time and funds. In my own case, e.g., it has taken some 16 years and over \$100,000 of my own personal funds to acquire my data base. And much of it is still not collated and digested, abstracted, and organized. Further, we cannot hope to enlist many brilliant young scientists in this area, for they have no data base available for them to immediately tap. Instead, we would ask them to expend years of effort and thousands of dollars to reacquire the same data over again! Obviously

this is unconscionable, and the progress of science in these unorthodox but extremely important areas is strongly inhibited. It is literally true that new and potent scientific breakthroughs would already have occurred in large numbers, had this bottleneck been removed or alleviated some years ago.

Accordingly, certain steps are proposed to alleviate the present problems in the field at minimal cost and with maximal positive effect. The steps necessary are:

1) A computerized data base of this data must be established and organized.

2) The data must be provided—and reviewed—by the few researchers presently in the field, because orthodox scientists do not know the material sources or the actual import of most of the references.

3) The data base must be so designed as to go on inexpensive but powerful microcomputers, so that very small organizations of 20 or 30 persons can afford a system. Fortunately, this is now amenable because of spectacular advances in microcomputers.

4) A centralized organization—preferably one already experienced with library functions and computerized data bases—must assume primary responsibility, both for organization and funding of the basic central system, and ongoing personnel support of at least one or two persons.

5) The data base must be made available by the central facility on diskettes, for ready purchase at nominal price by outflung small organizations in the field.

6) The central library repository must secure the necessary copyright releases or permits, etc., to allow this library-type transmission of the data base.

7) The entry of the data must be in terms of analyzed information—i.e., "finished intelligence," so to speak. It is accented that normal technical personnel do not have the capability of analyzing and commenting on the unorthodox significance of the references; such commentary must be provided by one or more of the present researchers in the field, and this commentary/analysis must be part of the formatted entry of the data. In cases where differences of views exist, two or more researchers in the unorthodox science field should make comments, and all the commentaries should be included.

From long and often frustrating years of effort in this area, I have arrived at a small system, capable of meeting all the above requirements, which I have slowly started to implement on my own small personal computer. (Note that my own computer system—Commodore 2001 32K RAM memory, with a dual floppy disk, on-line IBM Selectric typewriter, and on-line Epson MX-80FT printer—is actually inadequate for the job, but one makes do with what one must.) An appropriate, simple, customized information retrieval program appropriate for small

systems has been designed and is presently being coded by a personal friend. Work proceeds as funds can be obtained.

The desired system would be based around one of the new microcomputers of great power just becoming available using the Motorola 68000 chip. This chip is capable of directly addressing many megabytes of memory without segmenting it or using artificial and awkward input/output schemes. Hard disks up to some 30 to 40 megabytes are also becoming available at a very reasonable price. With twin 8" disks and printer, such systems will be retailing for less than \$10,000, even with a megabyte of RAM memory. With such a system and the customized software, small research organizations or groups could afford the purchase. And the group could then rapidly expand their data base, do document searches, etc. It is envisioned that each participating group would provide quarterly inputs to the central repository so that the data base could be continually expanded for all subscribers and users.

The intent is to make available to small groups, universities, colleges, and commercial and scientific organizations a simple, powerful, inexpensive system and data base incorporating the combined research efforts of the present limited few researchers in the field. It is envisioned that this system would enable rapid, almost explosive growth of this field, and great breakthroughs of a most fundamental nature in science itself.

A very rough preliminary budget for an appropriate effort would be:

<i>Item</i>	<i>Cost</i>
computer system and peripherals.....	\$10,000
complete software, debug, exercise, modify, finalize.....	3,000
personnel (to prepare data base).....	5,000
disks, supplies, utilities, etc.	2,000
Total	\$20,000

This would provide one system and six months' work, to digest the data base accumulated by one researcher, as a pilot program. Additional funding would then be required to maintain and expand the data base, but this portion of the effort could then be assumed by the central repository. At that time, of course, facilities would be required.

Users of the system would purchase their own computer system and peripherals, and subscribe to the central repository system as a standard kind of library function. The system is inexpensive, direct, and extremely useful.

INFORMATION RETRIEVAL PROGRAM

Entry Data Format

- [1] LOCATION (two letters, 26x26 bins)
- [2] ENTRY NUMBER (80-0001, ETC.)
- [3] AUTHOR'S LAST NAME
- [4] AUTHOR'S FIRST NAME, M.I.
- [5] AUTHOR'S LAST NAME
- [6] AUTHOR'S FIRST NAME, M.I.
- [7] AUTHOR'S LAST NAME
- [8] AUTHOR'S FIRST NAME, M.I.
- [9] TITLE
- [10] PUBLICATION
- [11] VOL, ISSUE
- [12] DATE (YR) (MONTH-MONTH) (MONTH) (DAY)
- [13] PAGES
- [14] SYMPOSIUM, PROCEEDINGS
- [15] KEYWORD
.....
(20 keywords or phrases)
.....
- [34] KEYWORD
- [35] ABSTRACT (text)
- [36] COMMENTS (text)
- [37] REFERENCE REMARKS (text)

Listed above are the standard elements of the recommended storage-and-retrieval procedure; shown below and at top of page opposite is the application of the procedure, allowing a typical complex scientific paper with addenda to enter computer memory in orderly fashion, subject to almost instantaneous recall to the CRT screen upon demand—today, next month, or years hence.

INFORMATION RETRIEVAL PROGRAM

Example of Entry Data Format

- | | | |
|---|--------------------------|--------------------------|
| [1] AF | [11] 285,X | [23] charge |
| [2] 81-001 | [12] 1980 May 15 | [24] quasistatic field |
| [3] Graham | [13] 154-155 | [25] field properties |
| [4] G.M. | [14] | [26] free energy |
| [5] Lahoz | [15] vacuum energy | [27] vacuum fluctuations |
| [6] D.G. | [16] Poynting vector | [28] spacetime |
| [7] | [17] angular momentum | [29] virtual particles |
| [8] | [18] static fields | [30] harmonic noise |
| [9] Observation of static electromagnetic angular momentum in vacuo | [19] vacuum gap | [31] detection |
| [10] Nature | [20] ether | [32] electric flux |
| | [21] Maxwell's equations | [33] virtual photons |
| | [22] superfluidity | [34] resonant frequency |

[35] Reports the first direct observation of free electromagnetic angular momentum created by quasistatic and independent electromagnetic fields E and B in the vacuum gap of a cylindrical capacitor. The experiment implies that the vacuum is the seat of something in motion whenever static fields are set up with non-vanishing Poynting vector, as Maxwell and Poynting foresaw. "It is remarkable that no known 'particle' can be identified as the agent of the observed electromagnetic angular momentum in exchange with the mechanical detector... According to these (Maxwell's equations) and as directly implied by our experimental result, permanent magnets and electrets can be used to build a flywheel of electromagnetic energy steadily flowing in circles in the vacuum gap of a capacitor as if Maxwell's medium were endowed with a property corresponding to superfluidity. The certainly new insight is that the quasistatic Maxwell's field is not merely an unobservable medium of interaction between matter and matter; it has in fact the mechanical properties postulated by Maxwell, in contradistinction to any 'action at a distance' theory."

[36] Comment by T. E. Bearden: This experiment essentially establishes the reality of the ether. Also, in previous experiments (Lahoz, D.G. & Graham, G.M., Can. J. Phys. 57, 667-676 (1979), Phys. Rev. Lett. 42, 1137-1140 (1979), a large resonant noise due to second harmonics coupled back as the resonant frequency was obtained. The experimenters do not appear to have recognized the possibility that this "noise" was energy being extracted from the vacuum fluctuations. In their present experiments, detuning from resonance by 1 Hz. was accomplished to eliminate the second harmonic coupling "noise." Also, this experiment proves the vacuum medium to be dynamic and detectable. In my view, vacuum, spacetime, charge, and virtual particle flux density or intensity are identical. I.e., the vacuum is identically charge, or what Faraday referred to as "electric flux" and present-day particle physicists refer to as "flux of virtual photons and other virtual particles." I accent that the vacuum is not "filled" with this charge flux, rather, it is this charge flux.

[37] Lahoz, D.G. & Graham, G.M., Can. J. Phys. 57, 667-676 (1979), Phys. Rev. Lett. 42, 1137-1140 (1979). T.E. Bearden, "Solutions to Tesla's Secrets and the Soviet Tesla Weapons," Tesla Book Company, 1981.



Proprietary to the United
Press International 1981
January 5, 1981, Monday, BC

SECTION: Regional News

DISTRIBUTION: New Jersey

LENGTH: 130 words

DATeline: MONTCLAIR

KEYWORD: Train-N.j.

Editors' note: Bearden's procedure provides broad access to very complex data through use of many keywords and other identifiers. When the information is simpler, the procedure may well be simplified. Time and money often wasted by "computer overkill" can be saved by letting the data itself help determine how best to store it. At the opposite end of the complexity scale is this example:

The "Nexis" logo (below) denotes a computer-storage system shared by most of the country's large newsrooms. Into "Nexis" pour millions of words, every day and night, the contents of major newspapers and mainline magazines within hours after broadcast or publication, plus the unpublished output of major wire services. Thus, in a newsroom hundreds of miles from the scene and more than a year after the occurrence, entry of the keyword "Train-N.j." is sufficient to (1) retrieve an obscure fatality report from storage, (2) display it on a CRT screen, and (3) produce the paper printout shown here—all in less than three minutes, at a cost well-regulated to the subscriber's needs and to the system's need to profit for having provided the service.

A 16-year-old girl on her way to school was struck and killed by a passing Conrail commuter train Monday as she walked along the tracks near the Montclair railroad station, authorities said.

The victim's name was withheld pending notification of relatives, police said.

Montclair detectives said the victim was walking along the tracks between Grove Street and Claremont Avenue about 8:05 a.m., on her way to Montclair High School, when she was struck by a westbound Boonton Line train from Hoboken.

The mishap occurred east of the Montclair railroad station. A New Jersey Transit Corp. spokesman said the accident scene was cleared by 8:22 a.m., but two eastbound trains on the line were delayed for about 15 minutes.

NEXIS

Books

THE BIGFOOT CASEBOOK by Janet & Colin Bord
(Stackpole Books, Harrisburg, Pennsylvania, 1982,
254 pp., index, \$10.95)

Reviewed by Sabina W. Sanderson

I'm afraid I don't see the point of this book. Apart from a few very early reports (some of them dubious), the first half of *The Bigfoot Casebook* simply rehashes material that will be all too familiar to anyone who has read any of the standard works such as John Green's *Sasquatch: The Apes Among Us*.^{*} Alas, the chapter titles in Part One are very misleading, having little to do with the content but *en masse* suggesting that the book will provide an increasingly definitive answer to the question Just what is Bigfoot? It does no such thing. Indeed there is no real discussion at all, and whenever the authors feel absolutely compelled to mention the fact that there are theories about all this, they refer the reader to another of their books.

Part Two is unabashedly a "Chronological List of Bigfoot Sightings, 1818-1980." The book jacket says there are one thousand of them and there may well be. I didn't count them and I certainly don't intend to read all the entries, which give the basic facts on each *sighting*. The Bords have quite deliberately not included reports of tracks or other evidence of the presence of Sasquatches, and this unfortunately produces a somewhat biased picture. The authors' hope that a chronological listing "may reveal patterns that will help researchers in determining the nature of the beast" is almost certainly unwarranted, if only because most of the entries are of the "Saw Bigfoot crossing the road" variety, which is not very helpful.

Really dedicated Sasquatch researchers may want this book strictly as a reference work but I cannot recommend it to anyone else.

^{*}Now available in paperback, Hancock House, \$12.95.

* * *

Reviewed by Danny Perez

This book, written by two "world-renowned investigators of the paranormal," is an invaluable survey of the Bigfoot phenomenon and indispensable reading for the ardent Bigfooter. "The main aim of this book is to present a round-up of Bigfoot sightings from 1800 to the present day . . ."

To date this is the most comprehensive listing of Sasquatch sightings ever published. Part One of the *Bigfoot Casebook* explores the more interesting sightings and re-examines some of the "classic" cases. Excluded from the first section are reports of footprints, odors, and sounds. Also in Part One are several photographs and illustrations, sixteen of which are new and many contributed by the doyen of Bigfootology, Rene Dahinden.

The Bords fail to realize that the so-called "Bigfoot tracks" from the Deltox Marsh, Fremont, Wisconsin (page 90) are fake. The same individual who investigated the case, Dr. Bernard Heuvelmans, later 'fessed up that the tracks were indeed fake.

In no one part of the *Casebook* do the Bords discuss

the many theories and speculations about the existence of the "Big Hairy Monsters." However, their *Alien Animals* (Stackpole Books) does discuss the theories and should be read in conjunction with the *Casebook*.

Part Two of the *Casebook* is composed of a chronological list (not the customary geographical list) of Bigfoot sightings, commencing at 1818 with a reports from Ellisburg, New York, and ending with a sighting from Snohomish County, Washington, in 1980, the cutoff date for publications.

In the bibliographical section the Bords have done us all a favor by listing addresses of the several research groups now actively investigating the Bigfoot question.

While reading this book I was struck by two items of interest: One, the apparent immunity to gunfire (of various calibers) by Bigfeet. Could it be that the Seattle Bigfooter is right—that Sasquatches are not composed of terrestrial biological material but made of barium, a heavy and somewhat dense metallic chemical element which would make these giants practically bullet-proof?

The other item of interest is that on several occasions these creatures have been seen to locomote on all fours. Author-journalist John Willison Green: "The reference to all fours may mean that these things are not as exclusively bipedal as man (their fore and hind limbs are more equally proportioned, for one thing) or those stories may not be true, to offer a couple of possible explanations."

The Bigfoot Casebook is proof of two things. One, the reports are there both in quantity and quality, reported by responsible people. And two, there is a very consistent picture of what the animals look like.

"I believe we should examine the *full context* (italics mine) within which the creature is seen, rather than continue to dwell almost exclusively on *what* is seen, on the object as a thing in itself," anthropologist Marjorie M. Halpin remarks. In other words, forget what's been seen, concentrate on *where* it is being seen. This must be the next step toward solving the Bigfoot mystery, because we all know that tracking Bigfoot is no small feat. (Excuse it, please!)

The Bigfoot Casebook makes enjoyable reading and is recommended for both armchair buffs and the so-called "experts" in the field.

LOCH NESS MONSTER by Tim Dinsdale (Routledge & Kegan Paul, Boston, Mass., fourth edition, 1982, 218 pp., \$9.50)

Reviewed by Sabina W. Sanderson

This fourth edition of Tim Dinsdale's *Loch Ness Monster* provides a splendid updating of that work, first published in 1961. It is extremely readable and in its own way as good as a detective-adventure story.

Basically it is a very engaging account of how Tim Dinsdale became interested in the Beastie, his preferred name for monsters in Loch Ness, and of his unflagging and dogged search for incontrovertible evidence of their existence. (His film taken in 1960 provided the first proof

but was not spectacular enough to convince the skeptics.) Into this account he interweaves a very helpful description of Loch Ness and judiciously chosen reports of sightings, some historical and some contemporary. He also provides an excellent analysis of information gleaned from (at least) a hundred of these reports and discusses in considerable detail the various photographs and films taken over the years. Until the advent of sonar these were the best evidence available, and a number of these photos and stills from films are reproduced along with numerous drawings. Finally he speculates sensibly on the identity of the Beastie.

The major addition is a series of appendices. The first, "Chronology of Effort," gives a year-by-year account of the search at Loch Ness through 1980 (with a preview of 1981). Appendix B deals with sonar results in largely non-technical language, and includes a helpful table with foot-noted references to scientific papers for those who want the full technical details. Appendix C provides additional information on the Shiels photograph and the Smith film, both taken in 1977.

Appendix D, "A Reappraisal of Results," might better be called a "ruthless reappraisal" though most of the evidence subjected to Tim Dinsdale's very objective scrutiny comes through with colors still flying. As he points out, ". . . mistakes can (and have) been made unwittingly, which have no dishonour in them. The fact that mistakes need to be identified, and isolated from the main body of evidence is equally important, . . . for they can otherwise prove misleading. . . ."

I recommend the book most highly—even the price is commendable. My only complaint is that it has no index.

THE TERROR by Michael D. Albers (Manor Books, New York, 1979, 168 pp. paperback \$2.25)

Reviewed by Ray W. Boeche

Ever since the case of Snippy, the Colorado horse who was mutilated in 1967, farmers, policemen, veterinarians and researchers have been baffled by the steady stream of animal mutilations throughout the United States.

Michael D. Albers' book, *The Terror*, chronicles in general terms the history of cattle mutilations from about 1973 to the present. It covers the general "wave" of mutilations in the south and midwest U.S. and presents many interesting individual accounts. Several good examples of various other Fortean phenomena concurrent with many of the mutilations are also covered—"manimal" sightings, strange groups of hooded figures seen in the mutilation areas, the infamous "phantom helicopters," and, of course, the numerous UFO sightings.

The three major schools of thought behind the mutilation mystery are all covered—the predator theory, the UFO-alien-surgeon assumption, and the cult hypothesis. A good portion of the book deals with the cult theory of mutilations in an attempt to show its lack of validity. A detailed account of the Jerome Clark/Kenneth Bankston affair, which catapulted the "devil cult" theory into prominence, is especially interesting. All three of the theories are dealt with in good fashion, and the impossibility of all of the evidence fitting any one theory is soundly demonstrated.

While Albers draws no conclusions regarding the mutila-

tions (one is disappointingly led to believe he will, however) he spends a great deal of time explaining the parapsychical and ultra-dimensional concepts of UFOlogy (a la John Keel, whose groundwork in this area is never mentioned). He accepts the idea that Bigfoot sightings, UFOs, men-in-black, ghost rockets, etc., etc., could all be explained in light of these concepts. Unfortunately, he seems to neglect the purpose of his book—cattle mutilations. No indication is clearly given of the relationship he sees between the mutilations and the other phenomena.

Several disturbing errors were found in the book—disturbing when considering the sometimes over-critical attitude of the author toward "amateur investigators" and their lack of scientific method and accuracy in reporting. Many times, for example, Albers seems unsure how many adds a single cow possesses; most glaring of all, however, is his reference to Dr. J. Allen Hynek's notorious "swamp gas" statement. Rather than placing it in conjunction with the Ann Arbor, Michigan, sightings, the context in which it belongs, the author attributes Hynek's remark to the well-known Exeter, New Hampshire, incident. One can only hope that more critical scientific thought and accurate reporting went into the other incidents mentioned in the book.

The Terror has its faults, to be sure, but it should give the reader unfamiliar with the mutilations story a good overview of the situation. To the serious researcher, it offers several intriguing individual cases.

HOW TO BUILD A FLYING SAUCER (AND OTHER PROPOSALS IN SPECULATIVE ENGINEERING) by T. B. Pawlicki (Prentice-Hall, Inc., Englewood Cliffs, N.J., 1981, paperback)

Reviewed by A. E. Weintraub

How to Build a Flying Saucer represents, to quote the author himself, "the work of a lifetime amateur," but the scope and coherence of Pawlicki's reasoning commands the respect of professionals and lay persons alike. Indeed, *How to Build . . .* overturns the notion that only well-funded and academically distinguished persons or groups are capable of major contributions to the world's corpus of knowledge.

How to Build . . . is a thought-provoking collection of essays (some of which have appeared, condensed, in *Pursuit*) written in clear, non-technical language. Drawing upon every facet of science, mathematics, philosophy, and natural phenomena, T. B. Pawlicki has successfully unified many fundamental concepts which have heretofore resisted integration, and has revealed a more comprehensive view of the immanent Order underlying the universe.

Curiously, *How to Build a Flying Saucer* begins with a discussion of the difficulties associated with the construction of ancient megaliths. Pawlicki presents some of his own novel solutions to the overwhelming engineering problems posed by edifices such as Stonehenge and the Great Pyramids of Egypt and China. But between the lines it is apparent that the author uses the early sections of the book primarily to set the stage, to clarify definitions, and to otherwise prepare the reader for far more important speculation and revelation.

After establishing the plausibility of an ancient, world-

wide power and communications network encompassing most major megalithic sites, Pawlicki continues his guided tour toward the very heart of his quest—the true attributes of matter, energy, space, and time, and their practical implications for Man.

Taking at first a bi-directional perspective, *How to Build . . .* dissects both the microscopic worlds of atomic and quantum theories, and the macroscopic realms of earthly and celestial phenomena, and elegantly unites both in a common geometrodynamics framework independent of scale. Citing Einstein, Tesla, Moray, Bohr, Bode, and many other luminaries, Pawlicki brilliantly demonstrates that “*all material must be standing-wave structures,*” and that there exists an infinite amount of pure energy (Zero-Point Energy) available to Man at any point in the universe—itsself a great cosmic hologram. Concurrently, the latest research is beginning to verify Pawlicki’s assertions: See, for example, “Quantum Radiation by Moving Mirrors” in the journal *Physical Review D*, Third Series, Volume 25, #10, May 15, 1982, from page 2569 to page 2575.

After such far-reaching intellection, Pawlicki turns his focus to the practical task of actually building a “flying saucer.” He shows that, once restrictive attitudes and narrow approaches are swept aside, the goal of gravity-manipulation may be more easily achieved than we had imagined. After presenting a concise summary of serious past efforts at gravity control, Pawlicki reveals his own theoretical basis for rapid transit. And although *How to Build . . .* defers a rigorous technical and mathematical development of antigravity, the book makes a materially significant and logically sound case for the feasibility of gravity-control, elemental transmutation, unbridled free-energy, and many other advancements which could prove vital to our resource-hungry planet.

In summation, Pawlicki lays bare the fabric of Space/Time, demolishes the fallacious time-loop paradox, and presents a holographic model of the universe which is nearer to a Grand Unification than anything yet presented by the professional scientific establishment. For where distinguished scientists have had to ignore “anomalies” in order to balance their equations, Pawlicki, like SITU, embraces all phenomena as perfectly natural; and expands theory and imagination to encompass reality.

How to Build a Flying Saucer is a fascinating experience, well worth reading and re-reading. It contains detailed illustrations, an agreeable touch of humor, and is written in a warm, personal tone. Pawlicki’s real message, found between the lines, is critically urgent and ultimately important: in the end, *all* matter, energy, space, and time is subject to Man’s volition; and with such power must come equivalent responsibility. Like a chrysalis, Man awaits the unfolding of his wings and the reward of his inheritance.

ICE: THE ULTIMATE HUMAN CATASTROPHE by Fred Hoyle (Continuum, New York, 1981, 300 pp. with photos, figures, illustrations, technical notes)

Reviewed by George W. Earley

The Ice Age is Coming! The Ice Age is Coming! That, in a nutshell (a container some may think quite appro-

priate), is the message of Sir Fred’s latest book. Hoyle, a maverick astronomer already viewed with suspicion by his fellows for his unorthodox views (to say nothing of his science fiction novels) is sure to garner more criticism for his conviction that another Ice Age is not only on the way, but that its advent is much nearer—perhaps even within the lifetime of his readers—than the conventional wisdom currently allows.

It is Hoyle’s belief, and he makes a compelling case for it, that all that’s needed to trigger a new Ice Age is a substantial reduction in the amount of solar energy reaching Earth’s surface. This solar energy is, for the most part, stored in Earth’s oceans where it forms a gigantic energy engine that powers our global weather systems. If we lost that solar-heat input, disaster would follow.

Ice begets ice, says Hoyle, noting that “turning only one-tenth of 1 percent of the amount of water normally present in Earth’s atmosphere into fine ice crystals would have a catastrophic effect on the climate. With most of the 64 percent of incident solar radiation that now penetrates the lower atmosphere being reflected back by the high atmosphere into space, the temperature of the land would collapse within weeks and the temperature of the ocean within a few years.”

But an outside force is needed to drop the upper atmosphere temperature to the -40° C. needed to create those fine ice crystals. Neither volcanoes nor micrometeorites, Hoyle says, can put enough particulate matter into the upper atmosphere to trigger such a temperature drop. What would do it, he says, is a giant stony meteorite, one that’s 300+ meters in diameter. Its impact would put over 50,000 million tons of debris into the air, and enough of it would remain long enough to lower the temperature of the upper atmosphere sufficiently to generate those fine ice particles. Our upper atmosphere would then become a vast icy shield, all too effectively blocking sunlight from reaching Earth’s surface.

The resulting Ice Age, Hoyle says (and he notes that studies of Earth’s past bear him out) would last 50,000 years, ending only when Earth took a hit by a giant iron meteorite whose absorptive particles would raise upper atmosphere temperatures enough above -40° C. to melt those reflective ice particles. Vast and icy rains would result. One such relatively recent rain, Hoyle believes, may have not only spawned world-wide flood legends but also caused the sudden extinction of mastodons, woolly mammoths and other shaggy beasts.

Given that Hoyle’s Ice Age is triggered by a giant meteorite, is there a way to prevent the global disaster he foresees?

His solution is an ingenious one, and it is within reach of today’s technology. Unfortunately, it requires greater cooperation among nations than we presently have. Since we seem unable to unite to eliminate the threat of world-wide nuclear war, I am not optimistic that we can unite to prepare to meet the threat of a new Ice Age.

You can help. Read this book. Become fully conversant with the threat Hoyle perceives. Then talk it up; maybe, just maybe, enough others will hear and believe. Otherwise, pray it doesn’t happen for a hundred years or so. By that time, it is to be hoped, mankind should be well into space emigration, thus insuring the survival of the species.

THE GREAT AIRSHIP MYSTERY by Daniel Cohen
(Dodd, Mead & Co., New York, 1981, illus., 212 pp., \$9.95)

Reviewed by Robert Barrow

Did mysterious airships, witnessed by thousands of observers, fly over numerous areas of the United States in the 1890s? Unfortunately, neither reader nor author knows the answer upon completion of this book. In fact, those who delight in reading books from back to front have a real treat in store, for they will pick up the author's point of view and the reasons why he presents his material in the fashion he does far sooner than conventional readers.

Of course, it is understood that the author can only go so far with this topic, which relies heavily upon questionably relevant newspaper reports of nearly century-old vintage. Cohen attempts, generally, to be open-minded about the airship controversy, with which most *Pursuit* readers are certainly familiar, but airship aficionados, confronted with a few theories that possibly extend beyond belief, might find portions of this accumulation a bit difficult to accept.

Frankly, expecting a routine re-report on airships, I was almost ready to pass this one up. However, its pages *did* reveal a redeeming quality: Cohen's so-so book about airships per se is, on the other hand, an informative indictment of the less respectable aspects of early American journalism.

Cohen prominently questions, for example, the role newspaper tycoon William Randolph Hearst played in publicity of the airship sightings—and, in particular, Hearst's puzzling decision to have the phenomenon ridiculed in his *Los Angeles Examiner*, while apparently praising the observations as highly credible in his *New York Journal*. Equally as discomfiting to the author are the all-too-frequent instances where an airship story obviously worthwhile for follow-up suddenly "disappears from the record forever."

Also of value, the various incidents and anecdotes presented effectively remind us that journalism some 90-odd years ago left a legacy to its modern news-reporting offspring: The knee-jerk tendency to deal with UFO (formerly airship?) reports by ridiculing witnesses *before* investigations are conducted.

The book also has an interesting section on Thomas Edison's reaction to the airship stories, makes a valid point about "liar's clubs" of the era, and reprints a few sarcastic, but intriguing, poems about the airborne phenomenon.

By all means, read *Airship Mystery* if the news media is your interest. If the airships themselves are your curiosity, refer to some of the sources Cohen quotes (such as writings by researchers Loren Gross and Lucius Farish); *this* title, as a reference, is on risky ground—unless one enjoys reading speculation that progresses from century-old airships to modern UFOs with the anemic and dubious theories of UFO debunker Philip Klass and others thrown in for decidedly bad measure.

"Now, for the first time," claims the book jacket, "UFO expert Daniel Cohen gives the full story of the great airship mystery and explains how it is related to the continuing mystery of the UFOs today." UFO expert? Full story? Explains how? Since this release is as important to

UFO findings as it is wanting about the airships, with little more than a little conjecture and glue binding its pages together, one can easily suggest that—drat—yet another dust jacket has led us astray.

WHOLENESS AND THE IMPLICATE ORDER by David Bohm (Rutledge & Kegan Paul, London, 1980)

Reviewed by Richard D. Wright

David Bohm, whose theory of what he calls the "implicate order" of the universe has caused a stir among physicists, physiologists, and philosophers, accepts classical science within its limits, works its way through the physics of relativity and quantum theory, and produces a startling view of the nature of reality.

As early as 1957, in his book *Causality and Chance in Modern Physics*, he stated that "scientific research does not and cannot lead to a knowledge of nature that is completely free from error. Rather it leads and is able to lead only to an unending process in which the degree of truth in our knowledge is continually increasing."¹ The book reaffirmed the questing nature of science and was hailed as "a return to common sense" within the field.

In the generation since that book (now a minor classic), David Bohm has used that common sense to develop his theory of the nature of reality. Much talked about for the last decade, it received its current statement in 1980 in the book *Wholeness and the Implicate Order*.

Bohm's theory goes beyond the paradigms of classical physics, which is the basic physics learned in high school. Speaking generally, classical physics is built on precepts of order assumed to be permanent. It is a kind of order that may be called a "lens-system" order. To understand what this means, remember that our concept of order is based upon the information perceived by the five senses and particularly by the sense of sight. This sensory information is all-pervasive and intense; when it is coupled with the learned, logical, linear sequence of language; it dominates our thinking. One can understand why this concept of order developed in science at the same time that the lens was developed and became widely used as a scientific tool.

A primary fact about lenses is that they bring details into sharp focus: that is, they objectify. The focus may be on the minute complexities seen through a microscope or the glorious vastness witnessed through a telescope. The use of lenses strengthened man's awareness of the parts of an object and relationships between parts, even those that cannot be seen by the naked eye. Because lens systems allowed one to break things down into ever finer parts of large units, the tendency developed in science to think in terms of analysis and synthesis. This tendency became so predominant that the classical approach became an analytical approach. It created a framework for the development of the "scientific method," and, within it, the scientific method was shown to be valid. The next step was then to extrapolate beyond the lens system, using the well-established scientific conventions of logic and reason.

This view created what can be called a mechanism approach to reality, which is an approach in which the world is regarded as constituted of separate units outside of each other, as in the parts of a machine. The world is viewed as if through a photographic lens, with point-to-point imaging even of things that cannot be seen by the naked eye.

Each part of the picture produced gives clear details of one particular part of the whole photograph. In a mechanistic science, one starts from these parts and derives wholes. In human terms, this means that people are trained to see reality as composed of bits and pieces of this and that, each having its own existence and each governed by logical, mechanistic laws. Anything else—that is, anything that cannot be scrutinized in the laboratory or through the lens system—is assumed to be illusory.

David Bohm takes a long look at classical physics and subjects its theories to what he calls the ratio of the structure of thinking to the facts as observed. If this ratio is not balanced, then (1) can it be re-established by means of adjustments within the theory, or (2) is a fresh perception of the whole fact necessary? There comes a time, he feels, when it is possible, in general contexts, that old orders of thought may cease to be relevant, so that they can no longer coherently be adapted to fit the new facts.

If this is true, then there also comes the unenviable task of developing new orders of thought. These new orders cannot simply be developed out of thin air, either. What is necessary is “to assimilate the whole of the fact in physics into the new theoretical notions of order.”²

There is one scientific phenomenon that holds a key position within Bohm’s theory, and that is the phenomenon of holography. This is the name given to a non-lens system in which is developed a photographic plate that contains nothing but raw information in the form of wavelike interference patterns. When the image is re-created by means of a coherent light technique, it exists in three dimensions, also to be seen from different points of view. Unlike a regular photographic negative, each region of the plate has interference patterns relevant to the whole structure, and each region of the structure is relevant to the whole of the interference pattern on the plate. If you break a small section of the plate and shine the coherent light through it, you still get the whole three-dimensional image. In terms of David Bohm, each bit of information is “enfolded” within every other bit of information, although when these bits are unfolded, they create the reality of every different part of the image. Each part is separate, yet each part is also enfolded in a holistic manner within every single segment of the original photographic plate.

If one now takes the concept of a holographic plate and expands it into further dimensions, one begins to approach Bohm’s theory. He suggests that a new order in science should consider the possibility that physical law should refer primarily to an order of undivided wholeness, as with a hologram, rather than to an order based upon analysis of separate parts, as with a lens. This order based on undivided wholeness would have the whole “picture,” or reality, enfolded into a whole order of different “pictures,” or realities. These realities, which are the ones observed through lens systems, would be “secondary realities,” while the enfolded order behind these would be “primary reality.” At this level, everything *is* everything else, and when the light of a higher dimension shines through any part of this secondary reality in which we normally function, it is possible to tap into the entire universe. The enfolded order is called by Bohm the “implicate order,” while the unfolded, secondary reality is called the “explicate order.”

In opposition to the classical physics approach, a

science that derives from a theory of implicate order begins with a concept of the undivided wholeness of the universe and derives the parts through abstraction from the whole. As Bohm states, “We come to a new general physical description in which ‘everything implicates everything’.”³ This is not just a theory of space, either. He contends further that the structure of primary reality “extends over the whole universe and over the whole past, with implications for the whole future.”⁴

Within this concept, each law of physics is valid, but only within a limited context, since it abstracts only certain aspects of primary reality and indicates them by some appropriate measurements. Behind these theories is a fundamental law. According to Bohm, the relationships within this fundamental law “are between the enfolded structures that interweave and interpenetrate each other, throughout the whole of space, rather than between the abstracted and separated forms that are manifest to the senses (and to our instruments).”⁵

An independent theory that dovetails with Bohm’s theory is that the mind itself processes information in a holographic manner. This concept, developed and investigated by brain physiologist Karl Pribram, proposes that the sensory input to the brain is transformed into wave patterns and that the wave patterns then spread throughout the brain, enfolded within each other. In this theory, based upon hard data obtained in laboratory studies, consciousness then becomes an overall, not a fragmented, experience as assumed traditionally. This means that the actual structure, function, and activity of thought is in the implicate order, and we are back with David Bohm.

This implicate order of thought is the one that is potentially the most immediate and the most direct. However, the irony is that in our usual process of thinking based upon a lifetime of training we learn to activate memory patterns that are recurrent, stable, and separable. This gives rise to an illusory state, such that the “manifest static and fragmented content of consciousness is experienced as the very basis of reality.”⁶ It is an illusion, but it “proves” the correctness of a fragmented view. Unfortunately the holistic view of the implicate order, even though more immediate and direct, is also more transitory and subtle. As a result, it become simply swamped by the intensity of the secondary reality.

As psychologist Robert Ornstein explains, “We consider that our own personal consciousness *is* the world, that an outside ‘objective’ reality is perfectly represented by our experiences.”⁷ Even from a traditional psychological point of view, however, our personal consciousness “cannot fully represent the external world or even the internal world, but must consist of an extremely small fraction of the entire ‘reality’.”⁸

Stepping beyond traditional physics, Dr. Pribram develops the idea that “if you penetrate through the world of appearances and objects and look at the universe with a nonlens system, in this case a holographic system, you arrive at a different view, a different reality. And that other reality can explain things that have hitherto remained inexplicable scientifically.”⁹

When we realize that everything is enfolded within everything, we can understand that what we call “empty space” contains an immense background of energy.

EARTH CHANGES AHEAD by Frank Don (Warner Destiny Books, New York, 1981, 272 pp., \$2.75)

Reviewed by Kim L. Neidigh

The last few years have seen an apparent increase in the amount of volcanic and earthquake activity and unpredictable bizarre shifts in weather patterns. Does this signal some upcoming cataclysm? Are we heading for another ice age? According to Frank Don, we are witnessing the birth of the Aquarian Age foretold by astrologers and psychics like Edgar Cayce; from the changes now ongoing in the geology and climatology of the Earth, a new world will evolve—one where man will live in harmony with nature, so we are told.

But prophecy, at least in the psychic sense, is not what this book is about. Most of the text is straightforward information about vulcanism, seismology, climatology, continental drift, and plate tectonics. For clarity of exposition, Frank Don cannot be faulted.

Since the time of the Chaldeans and Sumerians, man has believed that the positions of the planets affected human affairs. Although the idea has fallen from favor in recent years, science is beginning to admit that the activities of heavenly bodies may affect the environment and human life in ways never before perceived and to an extent that has yet to be measured. The Moon and the Sun create the tides and may have subtle effects on human physiology. Sunspot activity increases when Jupiter is

closest to the Sun; and sunspots have profound effects on the Earth's atmosphere. The influence of the planets may also be a factor in the triggering of volcanoes and earthquakes.

Don discusses at length the dynamics of volcanoes and earthquakes. He describes the stresses that form them and reviews major historical occurrences: the Mount Skaptar eruptions in Iceland in 1783-84, the great Krakatoa explosion of 1883, and the recent Mount St. Helens eruptions. There is ample evidence that such events come in cycles, and, with the current alignment of all the planets on the same side of the Sun, we may expect such geologic upheavals to increase in number and violence.

The author does not ignore humankind's effect on the home planet. The general public is probably not aware that our nuclear tests have caused "earthquakes" miles from the testing sites. It is feasible that man-made earthquakes may be the "ultimate weapon."

Besides altering the Earth's crust, we are changing the air we breathe in ways we do not yet understand. The debate rages as to whether continued pollution of the atmosphere may initiate a new ice age or create a "greenhouse effect" which could turn the Earth into another Venus; the evidence assembled to date favors ice rather than fire. Either way, we seem to be headed for changes—big ones.

Earth Changes Ahead is illustrated with many charts and maps, and a comprehensive bibliography is included.

IF YOU HAVE READ a recently published book about phenomena, and it has not been reviewed in *Pursuit*, why not write a review and send it in to be considered for publication? First, however, please write and let us know the title and author of the work you wish to review so that we may advise you whether the book has been "spoken for" by another reviewer. All book reviews receive the careful consideration of *Pursuit's* editors.

Astonishingly enough, one cubic centimeter of the matter is known universe.¹⁰ Matter, as we know it, is nothing more than a small, "quantized" wavelike excitation on top of this background, rather like a tiny ripple on a vast sea.

This "sea" of energy is perceived as emptiness or nothingness; and, in like manner, the vast "unconscious" background of explicit consciousness may be seen as an emptiness. It is not, however. The seeming emptiness is really the tremendously powerful manifestation of primary reality. Indeed, everything becomes part of this manifestation, including the observer himself. According to Bohm, each human being is not an independent actuality, but, rather, all human beings, as well as nature, are projections of a single totality. Even so, the theory allows each individual to use his own free will to set his own limits:

If man thinks of the totality as constituted of independent fragments, then that is how his mind will tend to operate, but if he can include everything coherently and harmoniously in an overall whole that is undivided, unbroken, and without a border, then his mind will tend to move in a similar way, and from this will flow an orderly action within the whole.¹¹

We have been looking for explanations too long in places where the light strikes us as much better, in places that seem reasonable, rational, and logical to classical physics. Those places, valid though they may be within the limited context of secondary reality, no longer are appropriate for the new paradigms. The key exists everywhere, but a search for its discovery begins within

each person's own house. David Bohm's theory offers a source of illumination for that search.

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7. Ornstein, Robert, *The Psychology of Consciousness*, New York: Penguin Books Ltd., 1972, p. 32.
8. *Ibid.*, p. 33.
9. Quoted in an interview with Karl Pribram conducted by Daniel Goleman for *Psychology Today*. February, 1979, p. 83.
10. Bohm, *Wholeness and the Implicate Order*, p. 191.
11. *Ibid.*, p. xi.

This review is excerpted from an article by Richard D. Wright published in the May 1982 issue of *The American Dowsers*, quarterly digest of The American Society of Dowsers. The excerpts are reprinted by permission of Mr. Wright and ASD.

Holography, described by the reviewer as holding "a key position within Bohm's theory," was extensively discussed, with particular reference to its Fortean aspect, in a 1977 paper by R. Martin Wolf, then managing editor of *Pursuit*. Mr. Wolf's paper was read at the First International Congress of Paranormal Phenomena in Mexico City and portions were published in the Winter 1978 issue of this journal (*Pursuit* No. 41, Vol. 11, No. 1).

Symposium

John White Answers His Critics with a Pole Shift Update

A recent survey of pole shift theories and of my book *Pole Shift*, written by Robert Schadewald and published in *Fate* magazine for October 1981 is by far the most useful critique I have seen, and it is welcome. His scholarship exceeds mine in the area of 19th century predecessors to those whom I call "contemporary scientifically oriented researchers" of the pole shift question. The bibliography he sent me a year ago contained many titles from the 1800s unknown to me. And his review of my book in *The Skeptical Inquirer* (Fall 1980) was fair-minded.

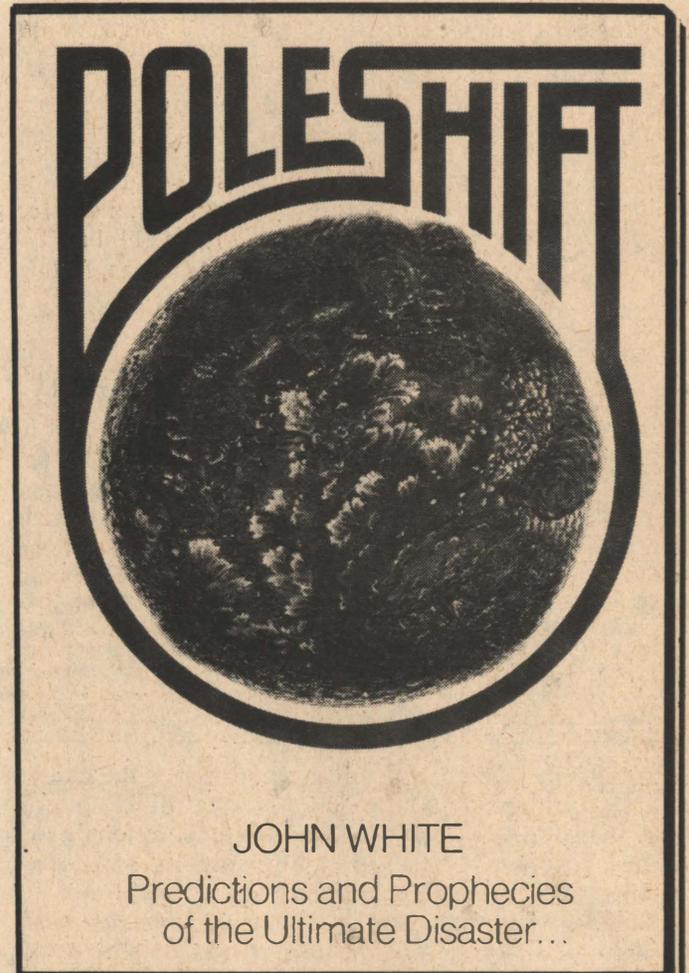
However, as I replied to him then, for all that, he seems to miss the point of *Pole Shift*. He says that he cannot depend on the theorists, psychics and prophecies reported there, and that catastrophic pole shifts probably will not happen. He also says that I disagree with that.

Not so—or at least, only partly so. There is a saying, "If you believe, no explanation is necessary; if you don't believe, no explanation is possible." I reject both those positions in this matter. I am neither a believer nor a disbeliever in pole shifts. I am simply advocating an open-minded investigation into the *possibility* of a certain type of Doomsday. To foresee is, not the same thing as to expect. I agree with Schadewald that we cannot depend on theorists, psychics and prophecies—yet. However, I see increasing evidence that a pole shift is both possible and probable, albeit with a very low degree of probability at present. The theorists seem to have various pieces of the puzzle indicating one is possible. Further, the psychic and prophetic traditions point to various "earth change" indicators that will precede a pole shift. Among them are: increasing seismic activity in the form of earthquakes and volcanic eruptions, erratic weather, climatic change, and cultural instability.

These "signposts" are readily evident in the news today. However, I am well aware that every generation has had its predictions of Doomsday—predictions which obviously were wrong. Moreover, I have no desire whatsoever to be an alarmist. Rather, I seek through rigorous research to go beyond the position of Schadewald, reasonable as it is, because there are important unanswered questions about pole shifts. Answering these questions could help us to take prudent action to avoid, or at least reduce, loss of lives and property, if research seems to confirm the predictions. On the other hand, if the questions are answered so as to disprove the pole shift concept and to refute the predictions, public fears can be allayed and attention turned to *real* problems. But until we have some really solid answers, Schadewald's position is no safer than any other—only more optimistic.

So in the interest of encouraging responsible research and dialogue on a subject that is potentially momentous, I will review the arguments to date and (re)state my own position.

First, *Pole Shift* has gone into four foreign editions



(British, Japanese, Portuguese and German), and is being published in a mass-market paperback edition by Berkley Books.

The book reviews have been a mixed bag. Opinion was divided almost uniformly along the "scientific" vs. "psychic" axis, with the mainline scientific journals/reviewers coming down hard on the book and other journals/reviewers who favor (or at least admit to) the possibility of psychic or paranormal events, giving the book good marks or at least not rejecting it out of hand.

For example, *Science 80* implied that I was whipping up "a mindless hysteria" and declared that "no amount of hand-waving can reduce the evidence overwhelming White's thesis" (although none was cited in the review). *New Realities* (formerly *Psychic*) said the book is "uniformly well-documented, and clearly and logically presented. . . . a compelling theory that is enormously readable." *Publisher's Weekly* remarked, "Hard science readers won't be able to down the emulsion" but *The A.R.E. Journal* (published by the Edgar Cayce organization) said, "*Pole Shift* exhibits careful reporting of the scientific issues in layman's terms. Earth scientists

will appreciate the efforts to achieve a consensus on controversial topics, while the general reader will recognize that he is in responsible hands."

Correspondence seemed to go the same way. NASA scientist (and skeptic of the paranormal) James Oberg wrote to me that he didn't think the axis is going to tip over, but since many people do, my book was worth the effort to read because it was "well done" and allowed the subject of pole shift to be discussed in a rational way. On the other hand, John Gribben, co-author of *The Jupiter Effect*, although friendly enough by letter to me, offered a left-handed compliment in a letter to a colleague friend of mine: "*Pole Shift*, of course, is brilliant journalism. Note how careful the author is never to say he believes the outrageous ideas, but to present them for others to believe or not, depending on their gullibility."

So it goes, and amid it all, I'm left with the feeling that hardly any of my critics can simply read without an emotionally conditioned reflex action.

I'll begin reviewing the arguments by quoting my letter to *The Skeptical Inquirer* in reply to Schadewald's review. As noted above, I acknowledged him to be fair-minded and scholarly in the matter, but nevertheless I thought he had missed the central idea of my book.

[LETTER TO THE SKEPTICAL INQUIRER]

I am aware of the conventional explanations offered for the topics examined in the book, and try to acknowledge them. However—and this is the point that seems to elude Schadewald—I raise the questions *because* of those conventional explanations, which simply do not cover all the facts. For example:

1. *The ancient maps of Antarctica*. Charles Hapgood summarizes the subject in his 1979 edition of *Maps of the Ancient Sea Kings* by saying, "The maps in this book show that an ancient advanced culture mapped virtually the whole earth [about 15,000 years ago or more, and] that its cartographers mapped a mostly deglacial Antarctica. . . ." (p. 239). This research has never been refuted—only ignored.

2. *The frozen mammoths*. Evidence suggests most strongly that the famed Berezovka mammoth died suddenly of asphyxiation in late summer in a temperate climate and that it was frozen by the imposition of temperatures in excess of -150° F. in ten hours or less. Contrary to popular belief, it was no arctic animal because it lacked the sebaceous oil glands that all cold-adapted land animals have to lubricate their skin and thereby prevent death by dehydration. Moreover, the arctic could not possibly supply enough vegetation to support vast herds of these herbivores, which required several hundred pounds of vegetation daily for each member. Yet their skeletons litter the tundra by the hundreds of thousands.

3. *Ice ages*. If slow and regular changes in the orbital geometry of Earth are the cause of ice ages, as conventionally claimed, what explains the following: first, the extremely rapid appearance and disappearance of continental-sized ice sheets; second, the vast epochs—each several hundred million years long, far exceeding the alleged periodicity of the ice ages—in which the planet was free of polar ice sheets; and third, the fact that the North American ice sheet during the last ice age was centered in Hudson Bay while the north polar area—as presently located—was virtually ice free?

4. *Anomalous glacial striations*. Continental drift cannot explain all anomalous glacial striations. Those in South Africa show a direction of movement toward, not away from the South Pole.

My role in *Pole Shift* is that of a journalist raising questions, not a scientist giving answers. I conducted my investigation not as a true believer but as a skeptical (and curious) inquirer. As my inquiry progressed, sufficient data appeared to convince me that a case for pole shifts could be legitimately made, despite the weak links that Schadewald rightly notes. But as I say in the book, *presenting* the case for pole shifts is not the same thing as *proving* the case. Thus I also say that the questions I raise need to be answered through rigorous scientific investigation. Such investigation has *not* been done, despite the statement of CSICOP member Isaac Asimov in *A Choice of Catastrophes*.

Therefore I call on the scientific community to do so without delay and without preconception or prejudice. The pole shift concept appears to offer a unifying explanation for a wide range of scientific anomalies and mysteries—an explanation that amounts to a potential revolution in many fields of knowledge—and if the scientific community could be interested in seriously reexamining an otherwise closed subject, perhaps we could then also see whether various predictions and prophecies of a pole shift at the end of this century have any validity. In other words, I am calling—on both intellectual and humanitarian grounds—for a scientific investigation of a certain claim of the paranormal.

* * *

I don't know how to put it more succinctly or more clearly than that. I've tried simply to raise questions and to point to certain unsettled or enigmatic issues in science because there may be an elegant solution to them all, and that solution may be what is being offered to the public in various forms by those predicting a pole shift. For this I have been lavishly damned in print. Now, I'm no stranger to the arena of media controversy, having been roasted a number of times by opponents and critics. I don't mind it. Yet it never ceases to amaze me that supposedly rational, well-educated people can so misconstrue a straightforward presentation and draw from it the non-existent basis for irrational, emotional and sometimes *ad hominem* attacks. Not that every opponent or critic does this, of course, but I've had my share, especially over *Pole Shift*.

For example, one Ph.D. in geology read about the book and, without actually reading it, rushed into print to label it "pure fiction." His letter to a newspaper declared, "An event such as John White describes is, of course, impossible, either in the past or in the future. Not only is there no geologic record of such an event, there would be a violation of several laws of physics . . . if such an event did occur."

My reply was as follows, and I offer it to help clarify the issues and to show where I stand regarding pole shifts:

[LETTER TO A NEWSPAPER AFTER IT PUBLISHED THE CRITICISM OF A PROFESSIONAL GEOLOGIST WHO HADN'T READ *POLE SHIFT*]

Science writer Arthur Clarke once commented, "When a scientist says something is possible, he is almost certainly right; when a scientist says something is impossible, he is almost certainly wrong." . . . The "laws" of science change as new discoveries are made, and when fact conflicts with theories, it is the theories that must change—along with rigid-minded theorists. Earlier scientists said man could never fly, nor exceed certain velocities, and that continents could never drift, nor

(Continued on page 90)

Letters

I would like to make some critical comments regarding Tom Bearden's article "Tesla's Secret and the Soviet Tesla Weapons," published in the Third Quarter 1981 issue of *Pursuit*.

On page 107 Bearden states: "Now mass is a spatial, 3-dimensional concept." This is not true. He has confused mass with volume. It is volume that is the 3-D concept, and things with volume do tend to have mass. Physicists frequently use the concept of mass when they are dealing with 1-D, 2-D, or n-D systems. In fact, they always try to reduce physical problems to 1-D or 2-D problems whenever possible because it simplifies the calculations.

He also asserts that charge is a 4-dimensional concept. But his conclusion that "mass and charge are thus of differing dimensionalities" is also incorrect. Charge and mass are fundamental properties of matter that do not necessarily involve spatial dimensions at all. This can be most easily seen in the case of the electron. The electron is a particle with both mass and charge, but it has no spatial extent. As far as the modern laboratory can tell, the electron is truly a single point from which an electric field emanates. Unlike the proton or neutron, the electron is a particle with no detectable size or structure (*Scientific American* magazine, May 1979, page 69). The electron is as close to the abstract concept of a dimensionless point as nature has ever offered us. Another point of disagreement: The author claims that "it is the charge of a particle of spatial mass (sic) that gives it the property of masstime, or existing in time." This is a very strange statement. Numerous particles, the neutron for instance, have no electrical charge, yet they have a mass which persists in time.

In general, the author's conception of the nature of charge and mass tends to make me suspicious of his many sweeping conclusions regarding electromagnetic theory. Other questions arise from Bearden's suggestion that the Soviets have developed powerful perpetual-motion machines. If the Soviets really have huge perpetual-motion devices, I wonder why they are spending millions of rubles each year trying to create an inherently obsolete nuclear fusion reactor. Bearden apparently hopes to justify perpetual motion by invoking the physicist's concept of "virtual energy." However, as I understand the concept, virtual energy is not a physically observable energy. It is not freely available as an infinite source of power for running macroscopic machines. The concept of virtual energy is not generally assumed to allow for any deviation from the experimentally observed principle of macroscopic mass/energy conservation.

Although the idea that the Soviets may be actively trying to develop weapons based on some of Tesla's claims seems possible, Brezhnev's comment on weapons "more frightening than the mind of man had imagined" should not necessarily cause us to invoke Tesla weapons as the explanation. For example, the USSR has publicly threatened to develop super H-bombs with a yield of 50 to 150 megatons each. By way of comparison, the much smaller 20-megaton weapons

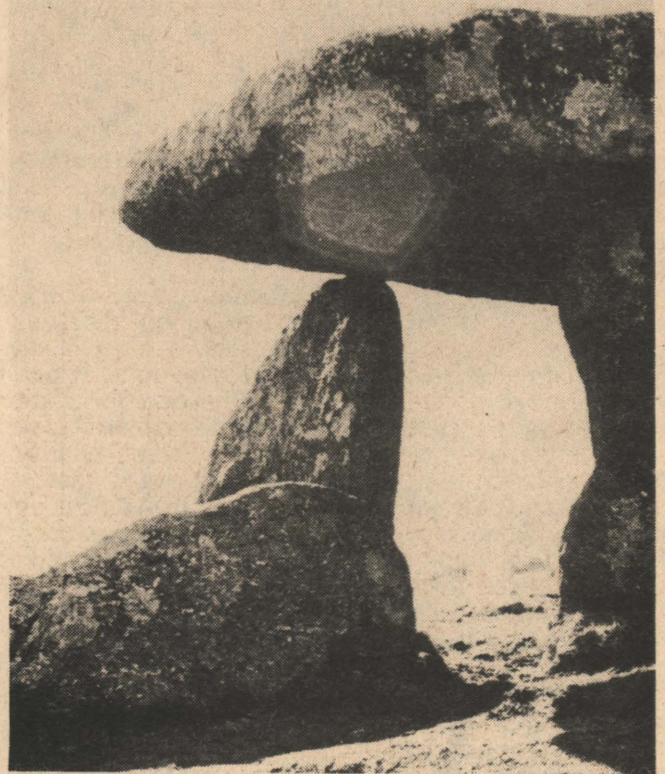
currently aimed at American targets each carry the energy equivalent of about 1,500 Hiroshima-type bombs. What rational person is not frightened to imagine these things falling on civilization? (Incidentally, for those who are grimly determined to survive WWII, I highly recommend Bruce D. Clayton's aftermath book entitled "Life After Doomsday" published in 1980.)

Tesla was a marvelous inventor and perhaps he did stumble onto some phenomena that are difficult to interpret with 1980s-style physics. Technology frequently utilizes phenomena that are way beyond contemporary theory. However, the particular physical interpretations that Bearden has placed on Tesla's mysteries, and Russian secrets, may be premature.

—Daniel Eden

As a Fortean researcher and professional photographer, I was interested in your two puzzle pictures in *Pursuit* No. 53, First Quarter 1981, page 45.

The picture submitted by Erich Krug is a typical example of lens flare caused by pointing the camera at, or very near to, a bright source of light. This causes internal reflections within the lens system which throws an image of the lens aperture blades onto the film surface.



Colin Bord's photo

The five-sided shape is a frequently used construction in modern 35mm cameras. I enclose a clearer example of "flare" from one of my own negatives. (See above.) As Mr. Krug's photograph was made during a November sunset, the source of the flare was probably



Erich Krug's photo

the setting sun. Possible because there was no flare seen on frame 5 because, without the infra-red filter, the sky background was not dark enough to show up the pale flare patch.

Ground Saucer Watch is incorrect when they state that the mark was caused by the camera shutter (*Pursuit* No. 54, Second Quarter 1981, page 94). The Minolta SRT 200 is a single lens reflex-type camera which uses the usual focal plane shutter, i.e., a flexible roller blind with a slit across it, which travels rapidly across the light-sensitive face of the film, thereby exposing it to the image formed by the lens. There is no way in which a focal plane shutter could cause such lens flare to appear. GSW have previously published analyses of UFO photographs. Perhaps their other reports were based on a clearer understanding of the principles of photography than this particular report reveals.

The second photograph, taken by the "very unsophisticated Arab," is more intriguing. It bears a



The Arab-Sanders-GSW photo

strong resemblance to what were known as "sun tracks" some years ago when many folding cameras fitted with extending bellows were in use. With repeated opening and closing, the bellows became weakened along the folds and sometimes developed pinholes. Then, if the camera was opened and carried about in the sun, the image of the sun formed by these pinholes moved about in a haphazard manner on the film and these streaks and blobs of varying density were recorded on the film.

Mr. Sanders says that the original was a Polaroid picture, and as most of the Polaroid cameras of the 1960s-70s had bellows, I suggest that this might prove to be a fruitful line of inquiry. As for the "something taking off after it landed near his house," I would suggest that unsophisticated Arabs enjoy a leg-pull as much as the rest of us, and even they are likely to be familiar with the lore of flying saucers. —Colin Bord

In his article "Tesla's Secret and the Soviet Tesla Weapons" (*Pursuit* No. 55, Third Quarter 1981), Tom Bearden points out that fault lines act as natural interferometers, microscopic rock-cracks opened by earth movements being the cause. My observations confirm this, because all the geoelectric forces I have observed are located along fault lines.

Last fall, I decided it was time to buy a sensitive meter and start making some tests. Most of my tests failed to detect anything, but I finally had a few circuits that gave results. A line of power poles crosses an active fault about two miles from my home. Four of these poles get hit by lightning on a regular basis; one of them was hit as hard as all the rest combined and even showed a fresh splinter just before Christmas, when no lightning could have hit it. My most important test is laid out along this fault line, starting near this pole. Because it's so far from my house, I can't check it as often as I'd like, and as a result, I miss a lot of important events. This makes it hard to make enough observations to detect a pattern. All I can say about this test at present is that it is giving readings, but I can't report on these until I make enough observations for some kind of pattern to emerge.

I have a few other experiments set up in my house, so I can take readings whenever convenient. While these are less conclusive than the one set up over the fault line, they are giving more information due to the easier way to get readings. My house is a mile from the nearest major fault, but only a quarter mile from a minor one. It seems the activity detected by these tests is only eddy currents from the fault lines, which explains the sporadic nature of the results, but this must be only a guess until more definite tests can be made.

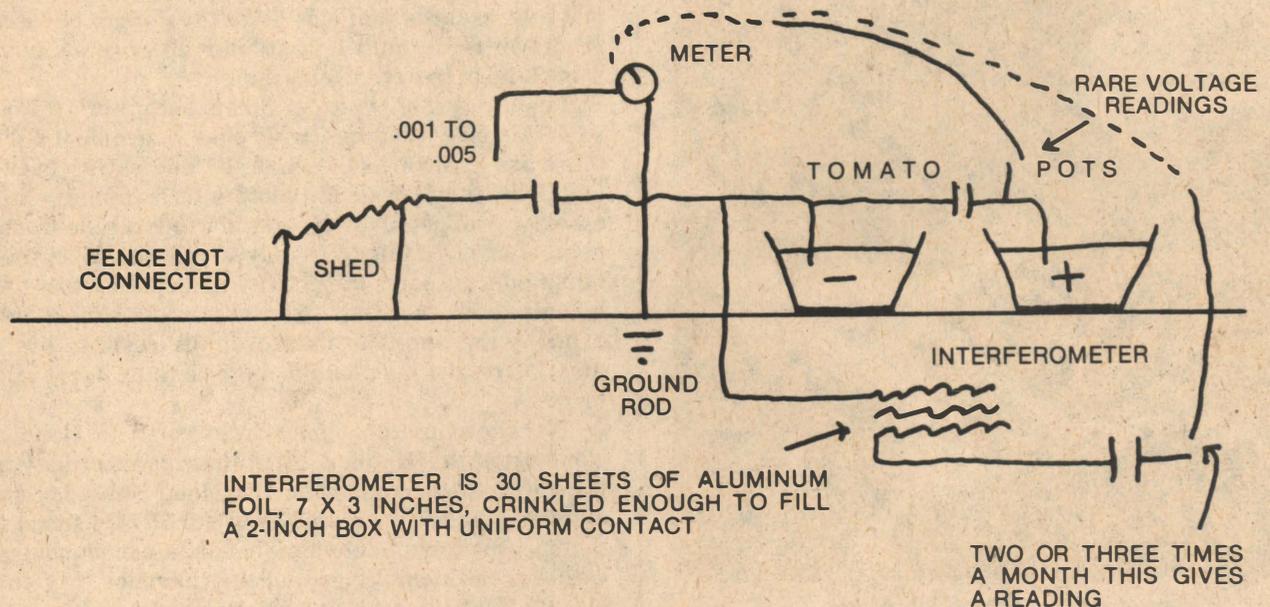
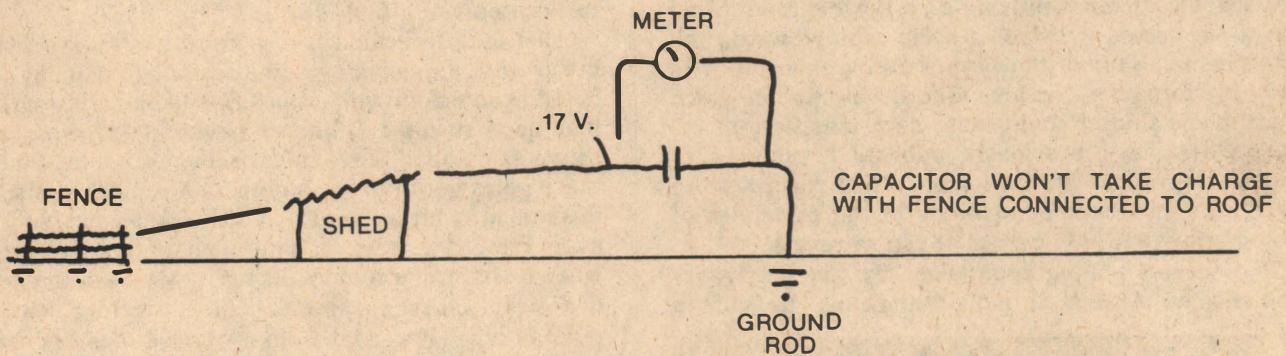
We know lightning goes from earth to cloud, not cloud to earth, so this is proof that the electricity is in the earth all the time, and the cloud only acts as an electron sink to give it a place to go. So I reasoned that the best method of detecting it was to use capacitance, with the earth as one pole of the capacitor. My circuit on the fault line uses this principle, with results

confirming the logic of the assumption. Since this circuit proved valid, my next idea was that a nearby shed had wooden walls, which should act as a dielectric, and the sheet metal roof should react with the earth to form a capacitance that could be detected. I connected to this roof, and a ground rod driven deep in the earth just outside the front window.

My ground connection proved to have negative polarity, as expected, but to my surprise, the shed roof was a much stronger negative, giving a reverse reading of the meter. This had to be caused by ions in the air being stronger than the capacitance with the earth. I originally used a fence for a ground connection, which is barbed wire strung on steel poles set 1½ feet in the ground. Since it was winter when I set this up, I finally made myself warmer by stringing a wire through the window, so I could get readings without going outside. Winter was very stormy, and the roof gave huge variations in readings due to the ionic activity associated with storms. This screwed up all my tests for two months. When I first set up the roof to earth circuit, using the fence as a ground, my voltage readings ran between .01 to .05 Volts. Then I nailed down the loose roof panels, and the voltage dropped too low to measure directly. In order to get any reading at all, I

hooked a condenser from a car ignition in series, as the diagram shows. By the roof charging this, I could get a reading of .001 to .005 Volts on discharging this condenser. When storms came in, and the roof ionised, voltage rose to former levels, which could be read without the use of a capacitor. It would charge the capacitor, just as any current would do, though I didn't need it to get a reading.

O.K. Now, the stinker: One day, just to see what would happen, I hooked up my fence directly to the roof. With my meter on the most sensitive setting, it put the needle off the scale. I had to set it on the second scale to keep the needle on the scale. This gave me .17 V., which I didn't take as significant, because I figured this was just electrolysis. My steel fence posts were probably a different alloy than my other ground rod, and the moisture reacting with salts in the soil were probably just turning it into a wet cell battery. I didn't do much with this hookup because I assumed I had just made a battery. Finally, one day I hooked a condenser in, and to my surprise, it wouldn't charge it. I kept repeating this over several weeks, and no matter how I connected this, it won't charge a capacitor! Why??? I can charge them with the roof when the fence isn't connected. It will charge them when the roof is ionised



by storms passing over. It will charge with flashlight batteries. But hook the fence to the roof and it won't charge a capacitor. How can a voltage too low to register be able to charge them, and ionised air charge them, but a voltage 100 times higher still not charge them??? Auto ignition condensers are designed for 12 V. so it isn't from exceeding their design. No matter how I hook them in the circuit, it's as if they were solid insulation. The other half of this mystery is that when I'm getting a heavy ion reading, they act as conductors, passing current through, and even giving an ohm reading.

Next, I set up tomato pots to check the effect on plant growth. One has a wire directly to the ground rod, the other pot has a capacitor to reverse the polarity. A third pot is unconnected to serve as a control. I planted these on New Year's day, but being winter, all are slow growing. The control pot sprouted first, the + pot next, the - pot last. Soon, the + pot was twice as tall as the control pot, and the - pot was almost dead. I had to pull out the wire to keep it from dying. On Feb. 11, it looked like the - pot was lost, so I replanted all pots to keep the test in. The same day the seeds sprouted from the second planting in the - pot. Two days later, the + pot sprouted, and suddenly the roof polarity changed to +, where it had been - all winter. The growth of the

plants reversed. Now it's the — pot that is growing best, where it almost died before the roof polarity changed. I think the air ions weakened, and the earth polarity grew enough stronger to overpower the air ions.

Storms had screwed up these tests all winter, but the last week of February turned fair and I was able to get readings without ion interference. Soon a pattern emerged. I had known from the first that voltage readings varied between day and night, but a week without storms gave a pattern. I finally had to assume the earth moving through space is crossing an electric field of some kind. It may be the "ether" of space that Einstein claimed didn't exist. It may be some other force. Whatever the cause, it has nothing to do with the earth-sun line, but has an association with the earth-galaxy movement. If there is some magnetic field in space, the earth cuts it as it orbits the sun. I've drawn a sketch to show how my voltage differs by time of day; it starts after sun-up and ends just before midnight; the peaks and lows are positioned accordingly.

I had assumed the earth is closest to the sun in winter because the sun is also moving around the center of the galaxy. However, the pattern shown by the voltage differences seems to indicate another path for the sun.

—Evan Hansen

I read John Sinkiewicz's article on the Planetary Grid (*Pursuit* No. 57)—fantastic! It would appear as though my upcoming article about "extra-terrestrials" picked up where his ended. Unreal!

Please forward four journals, Vol. 15, No. 1, and enclose bill for same.

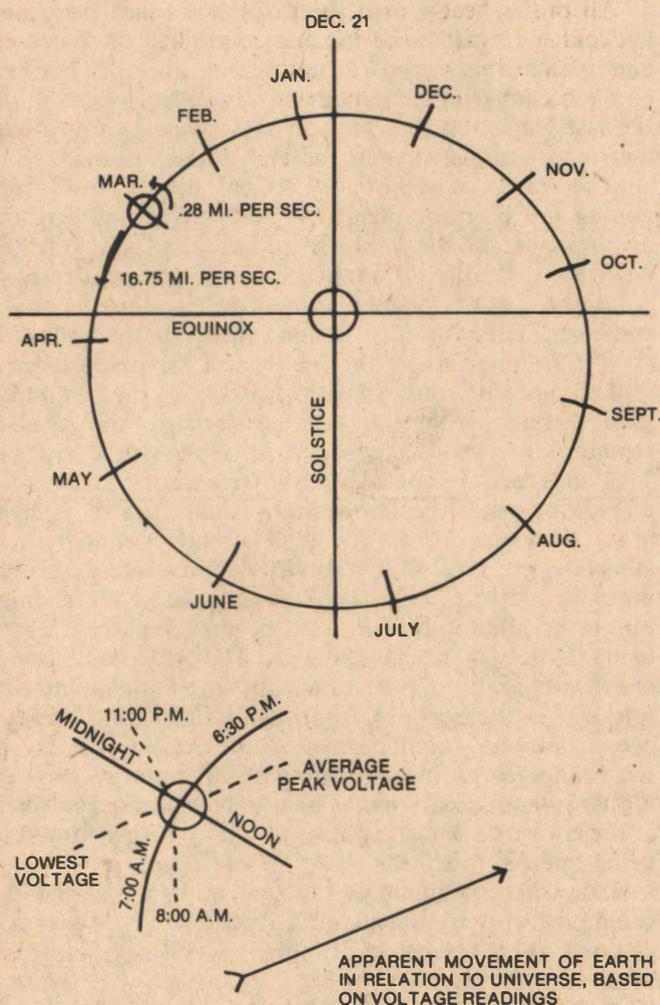
—Dr. Joseph L. Intelisano

Vol. 15, No. 1, Whole 57 was a particularly good number. I enjoyed all the articles except "The Planetary Grid," which I call a So What? You read the whole thing and when you've finished, you have gotten little out of it, and about the little there was, you are apt to ask So What?

However, the rest of the articles I loved and found them interesting and profitable reading. I especially liked the Wirth article, "The Chinese Connection," and read it twice. Gallagher's article was of great interest and I'd like more along the same lines. Bird's article on water I also liked enormously. So please thank all the people who helped in the making of this number and tell them not to work too hard on my account, but I would truly like more of the same type of material. Thank you for affording me two nights of good entertainment.

—Mrs. M. Mills Jenkins

LETTERS to *Pursuit's* editors are always welcome. Please send letters to Fred Wilson, 66 Bortic Road, P.O. Box 134, Cedar Grove, NJ 07009. Letters are subject to abridgement as necessary to insure fair sharing of the limited space available.



Symposium: Pole Shift *(Continued from Page 85)*

atoms be split. Those scientists also declaimed the "laws" of nature in support of their position.

It is interesting to note that [the geologist's] condemnation of my book was made without even reading it. He might just as well have said, "My mind's made up; don't try to confuse me with facts." In plain language, his position is ignorant and prejudiced.

[He] may be interested to know that several scientists who *have* read my book have offered praise for it. A geologist (Dr. Jeffrey Goodman, author of *We Are the Earthquake Generation*), an astronomer (Dr. Gerrit Verschuur, author of *Cosmic Catastrophe*), an archeologist (Dr. David Zink, author of *The Stones of Atlantis*) and an anthropologist (Dr. Roger Wescott of Drew University) all feel I have done a creditable job of researching the question of pole shifts, pro and con. They also feel that my findings raise disturbing questions bearing on the future of all life on Earth.

These disturbing questions cannot be avoided by reasonable, thoughtful people. They *can* be avoided by unreasonable, dogmatic people who smugly believe they have a monopoly on truth. Such people often use ridicule and suppression to avoid the controversial issues I raise in *Pole Shift*, but sneering authoritarianism resolves nothing and is most unbecoming in a member of the scientific community.

For those who are willing to hear my presentation before judging the issue, *Pole Shift* will provide a full reply to [the geologist's] attack. They will find that scientists ranging from Darwin to Einstein supported the concept of polar shifts, and that the subject continues to be examined in scientific literature. As recently as October 1978, the *Journal of Physics* had a long article demonstrating that pole shifts could take place without violating the laws of physics. The article also showed that historical evidence of such shifts is abundant.

... [The geologist] probably will continue to stand by his original statement that there is absolutely no geologic record of any such event having happened, but he does so at the expense of intellectual integrity since he made up his mind before examining any of the evidence [that I present]. Moreover, he had made up his mind not on the basis of the geological record, as he asserts, but on the basis of *interpretation* of that record. The pole shift concept offers a new interpretation—an interpretation that he dismisses out of hand.

My objective in writing *Pole Shift* was to engage the scientific community in rational discourse and to initiate a full-scale investigation into the subject because of its potential impact on science and society. I continue to hold these objectives. And I reiterate my position in the book: In reporting the case for pole shifts, I am acting as an investigative journalist raising questions, not a scientist giving answers. I am quite prepared to accept the verdict of the scientific community that pole shifts are "pure fiction," but only after a *legitimate* hearing rather than by kangaroo-court trial in the newspapers. If the final judgment is on [the geologist's] side, so be it. But in such a case, readers should understand that [the geologist] would be right for the wrong reasons. Knee-jerk reactions due to prejudice are never sufficient grounds for intelligently settling a debate.

* * *

To those who have labelled me a "true believer" in pole shifts (past or future), as a review in *Library Journal*

did, I reply (as I did to that journal): "I do *not* believe that, and I say so repeatedly throughout the book." On the other hand, obviously, I don't dismiss it totally. Does that make me a Doomsday advocate, as *Kirkus Review* implied? I don't see the logic. I am simply advocating an open-minded investigation into the *possibility* of a certain type of Doomsday. To foresee is not the same thing as to expect.

But enough of what may sound like an overly defensive complaint. I said this would also be an update that reviews the arguments and developments since the book was published. Let's look, first, at the four categories I listed in my reply to Schadewald, but in reverse order.

Anomalous glacial striations. No further data have come to me on this subject, and my position remains unchanged.

Ice ages. A paper by a Swedish physicist, Stig Flodmark, (discussed below) offers a new model of polar shifts that also accounts for ice ages and their anomalous (rather than regular) appearance in Earth's history.

It may be the mechanism sought by Dr. Michael Herron, research assistant professor at the State University of New York at Buffalo, who recently offered the results of a ten-year drilling project completed in Greenland. A 7,000-foot core from the Greenland ice sheet revealed climatic data on a year-by-year basis as far back as 10,000 years ago, when the last great glaciation—the Wisconsin glaciation—ended.

According to Herron, the data shows that the change between "normal" and ice age conditions on Earth has been surprisingly and dramatically abrupt. In fact, climatic change may have been so sudden at the end of the last glaciation that Herron says he has no idea what mechanism might account for such a quick change.

The frozen mammoths. This has been a lively topic among my correspondents. William White of England, an opponent of the flash-freeze school of thinking, has written a deeply thoughtful reply to my research colleague, Leroy Ellenberger, and me, in which he makes some very telling points. Among them are the following: (1) We are unaware of the findings of the new science of taphonomy, the study of all the processes that an animal goes through from the time it starts to die until its remains are finally embedded in a geological stratum. This approach demonstrates that mammoths died not as a result of disastrous temperature change but of asphyxia (e.g., drowning in an icy stream, suffocating from a landslide, etc.). (2) Other studies demonstrate that mammoth flesh is not so well-preserved as has been claimed, but rather that the flesh had begun to putrefy *before* being frozen in permafrost. (3) The sebaceous glands, which we argue are necessary in all arctic animals to tolerate extreme cold, are missing in mammoths but present in woolly rhinoceroses. Since rhinoceroses are often found frozen in company with mammoths, how can the two—supposedly living in widely separated locations at the time of a catastrophic pole shift—be accounted for being interred together?

I replied to William White that he had indeed raised some powerful arguments, and I was not yet prepared to respond to his assertions. "I simply want to go on record at this time," I wrote, "as being concerned with the truth of the matter, however that may reveal itself. If 'the riddle of the frozen mammoths' ultimately proves to be a

pseudo-problem, so be it. I believe that one is entitled to be wrong in his opinions, but not in his facts." I added, however, that an eventual disproof of the frozen mammoth argument would not necessarily disprove the more general thesis of pole shift.

"Even that subject," I wrote, "is not something that I feel obligated to defend to the death—only to the truth, as it may become clear to us. So I thank you for the vigor with which you pursue this investigation, and look forward to a more concerted effort by all concerned to come to a firm conclusion in the matter. Exactly that has been my purpose all along."

Shortly afterward, Dwardu Cardona, a catastrophist who defends a sudden freezing of mammoths, sent me a copy of his response to White's letter, which Ellenberger had showed him. Cardona's comments, entitled "The Mammoth Controversy," are scheduled for publication in *Kronos* (VII: 3) along with White's letter. I am grateful to the editors for allowing me to quote briefly from Cardona's article. The excerpts are self-explanatory. I have omitted the references.

[EXCERPTS FROM DWARDU CARDONA'S ARTICLE]

Despite White's statement to the contrary, however, the commencement of putrefaction *prior* to freezing has never been satisfactorily proven. Eyeballs are among the first parts of the body to rot after death, yet some of the mammoths discovered in Siberia had their eyeballs intact.

Dima [a 1978 find] is the only specimen so far to have been discovered in an unthawed condition. I might be wrong but, to my knowledge, it showed no signs of putrefaction. Yet even if it did it would not much matter, for there is nothing in prevalent catastrophic theories which excludes interim, even if minimal, thawing between catastrophes.

The fact remains that, where mammoth carcasses, in whole or in part, have been discovered, decomposition has been minimal. They did not decompose away . . . if climatic conditions have not changed since the mammoths roamed, why is it that only extinct species are ever discovered entombed in ice?

What I do grant William White is that the direct cause of the Berezovka mammoth's death was asphyxia *before* freezing. That has always been known and admitted by catastrophists. Suffocation, however, is not necessarily the result of drowning and/or landslide burial as White and others would have us believe. Ivan Sanderson, Immanuel Velikovsky, and Charles Hapgood, have all described extraordinary, *but possible*, atmospheric conditions which *could* have asphyxiated the mammoths just prior to freezing. While not necessarily correct in the details these investigators have supplied, it is a fact that, both in Alaska and Siberia, mammoth remains are associated with evidence of atmospheric tempests of unprecedented dimensions. *And it is this overall picture, not the hair-splitting issues we have been debating, that is the crux of the matter.*

The "young but powerful science of taphonomy," upon which White relies, has shown that the carcass of an African elephant decays in about three weeks, leaving nothing but the tough skin covering the bones. In temperatures which, according to Farrand, were higher than the present 90-100° F. of the Siberian summer, the Berezovka mammoth should have likewise decomposed. The position in which this beast was found clearly indicates that it could neither have been drowned nor crushed beneath a slide. Its stance suggests that it was felled on its haunches, that it attempted to regain its feet,

that it was then somehow asphyxiated, and that it froze in this animated position. It did not even keel over.

* * *

I think Cardona has answered White better than I could. Ellenberger, however, is preparing his own reply.

The ancient maps of Antarctica. No further data have come to me on this subject either, and my position remains unchanged here also. As Hapgood told the *National Enquirer* (January 15, 1980), "All the evidence shows that there had to exist a very advanced civilization that was worldwide [more than 20,000 years ago]. They mapped the whole world, except for North America, which at that time had an ice cap over it." And in a 1980 article in *Catastrophism and Ancient History* he wrote, "Our best indication of a warm Antarctica is an authentic map [the Oronteus Finaeus map of 1531] showing Antarctica free of ice . . ." So far as I know, his position remains unchallenged—only ignored.

Other noteworthy events regarding the theoretics and evidences of a pole shift was the 1980 publication of a colloquium, "Reversals of the Earth?", in Volume IV of the *S.I.S. Review*, a British journal dedicated to the investigation of Velikovskian ideas. C. Leroy Ellenberger and Eric W. Crew commented on Peter Warlow's proposed mechanism in his *Journal of Physics* paper, raising some objections to certain aspects of it, which were replied to by Warlow. At the conclusion of the exchange among them, Crew commented, "The paper by Warlow represents a very important contribution to astronomy, geology, climatology and ancient history." Pole shift skeptics may think that a gratuitous remark in a mutual congratulation club, but a reading of the colloquium makes clear that there was rigorous search for flaws in the proposed mechanism, and none were found.

Victor J. Slabinski thinks differently, however, and has apparently refuted Warlow's mathematical proofs of the dynamics of polar shifts. Slabinski is a member of the astrodynamics department at Communications Satellite Corp. (Comsat) in Washington, D.C. In his paper "A Dynamical Objection to the Inversion of the Earth on its Spin Axis," published recently in *Journal of Physics A* (September 1981), Slabinski shows that Warlow's computations are flawed by three separate errors, and thus his analysis is false. Slabinski's own computations show that the inversion of Earth as proposed by Warlow cannot be produced by the gravitational attraction of any known cosmic body in the solar system making a close passage to Earth. Using Warlow's corrected computations, he says, an inversion would require "a 417 Earth mass body passing at two Earth radii." He concludes: "If such an inversion ever did occur, its mechanism remains unexplained."

A knowledgeable source tells me that Warlow has not replied to this yet, although a copy of Slabinski's paper has been in his possession for more than a year.

Another line of scientific support for the pole shift concept, which *Kronos* brought to my attention, comes from Sweden. A theoretical physicist, Stig Flodmark, has given a number of papers on the subject at scientific gatherings there. Flodmark is associated with the Institute of Theoretical Physics at the University of Stockholm. In August 1981 he presented a 62-page paper,

"The Earth's Rotation," at the European Geophysical Society's meeting in Uppsala. He proposed a "double-top" model of the planet in which the solid inner core is separable from the solid mantle and viscous part of the core. Frictional forces normally keep the "tops" rotating in unison or nearly so, but there is a slight differential which can explain observed small polar motions known as the annual wobble and the Chandler wobble. The double-top model, Flodmark asserts, also can explain glacial ages, magnetic pole reversals, faunal extinctions and other enigmatic topics in Earth's history and geology. Most important, Flodmark shows that a pole shift is theoretically possible "during one single day" and that "some perturbation of the smooth rotation of the earth could be expected shortly."

So where are we in the Earth changes scenario and in the debate about pole shifts? From the *scientific* perspective, we are far from resolution. The subject remains strongly in need of thorough examination.

From the perspective of *psychic scenarios* covering the next two decades, we are approaching a critical period. According to the predictions by many psychic sources and by interpreters of prophetic tradition (certain fundamentalist Christian ministers are notable among the latter), the period from 1982 to 1984 is going to be a time of major seismic activity around the world. Some have gone on record as saying that the "Jupiter effect" is going to be devastating in 1982. (Even though John Gibben has withdrawn from its thesis, claiming it to

have been thoroughly disproven, the Jupiter effect will have its definitive test in mid-November 1982, when Earth is on one side of the sun and all the other planets are in a 100° arc on the other side.) The Cayce readings about earthquakes striking the west coast of America, which have "set the baseline" in the psychic community regarding earth changes, also will be put to the test by 1982. I point out in *Pole Shift* that Cayce's prediction, even when interpreted in the broadest possible fashion, will have reached its limit of reliability by the end of 1982, which will in turn bear directly on the accuracy of his pole shift predictions.

My position, therefore, is this: Schadewald is probably right when he predicts that the investigation I call for will never happen. The handwriting is on the wall pretty clearly in that department. Yet I continue to hope for it—on humanitarian grounds since, I'm sorry to say, an appeal to intellectual curiosity seems to find little audience in the scientific community.

As for the psychic predictions, we won't have to wait until the year 2000 to see if they are true. By the end of 1982 we will have a pretty clear indication of whether they are essentially correct and on schedule or merely fantasies and recycled versions of Cayce-type pronouncements.

Will the moment of truth bring pole shifts or position shifts? Stay tuned.

—John White



The Origins of Lemuria (Continued from page 70)

boundary lines, and they wouldn't have been of much use as pens, for they are mostly straight and only a few intersect. A few parallel walls have gaps of ten yards between them. The Milpitas walls 25 miles south of Berkeley are likewise mysterious. They are built on grassy hillsides and are too low for defense or use as animal pens; they appear not to be piles of stones dumped haphazardly by farmers clearing their fields.

The Berkeley walls were known as mysteries as early as 1916 when Harold French wrote about them. He found walls near Baldy Ridge that were 700 feet in length. He insisted that there was no evidence of Spanish settlers or later Mexican farmers as their builders. He mentioned a legend of the local Matalane Indians who said that the walls were the work of an unknown "hill people," who supposedly built the walls as forts for protection from the Matalanes. French suggested that the Berkeley walls were Atlantean structures, noting that Matalanes sounded much like the name Atlantis.¹⁹

Additional details are given in Jim Brandon's book, *Weird America*.²⁰ He notes that some of the walls are in the Tilden Regional Park northeast of the University of California campus. Some walls were destroyed during the construction of the park's botanical gardens, but many sections remain. Most of the scientists who have examined these walls have dismissed them as Indian game traps, ignoring the fact that game could easily jump over them. Another theory holds that they were used as livestock corrals, but cattle could get over them almost as readily as game.

Donald M. Viles, a California historian, suggested

that the walls were built by Spanish friars (or by their Indian serfs) between the 16th and 18th centuries; they seem to resemble the drystone walls of Spain.²¹

Viles has two photographs of similar stone walls in Grass Valley, northern Oregon, and in southern Washington state.²² The Oregon wall blocks all entrances to the valley beyond.

Archeological enigmas of course abound in California and adjacent states. One of the oddest discoveries ever made was at Lompoc Rancho, 60 miles northwest of Santa Barbara. In 1833 soldiers who were digging a storage pit unearthed a human skeleton 12 feet long. Stone axes, carved shells, and porphyry blocks covered with indecipherable symbols were also found. Was this one of the giant Lemurians that Blavatsky's followers said had inhabited Mu? We will never know, for the soldiers hastily reburied their find, and no wonder. The skull reportedly had two rows of teeth on the upper and lower jaws. This could have been a hoax; it also could have been the discovery of a human anomaly, complete with artifacts, from a vanished race of people unknown to modern anthropologists.²³

The Channel Islands off California have their share of archeological mysteries, too, which the enthusiast could link to Lemuria. L. Taylor Hansen described some remarkable finds made by Dr. David Banks Rogers, curator of the Santa Barbara Museum of Prehistoric Man. He found evidence that a great cataclysm of some sort had destroyed sections of land which once extended 100 miles out to sea but which is now submerged. The

(Continued
from page 73)

clips to the SITU offices in New Jersey. Within an hour after the first newspaper arrived, a letter was on its way to Jon Beckjord, director of Project Bigfoot in Seattle and considered the leading field-investigator of Bigfoot reports in the U.S. Northwest.

Beckjord responded with sharply detailed photographs of casts made from two different types of tracks: one found near the reported sighting, the other a "toeprint" track discovered a week later in a remote area of the watershed. (See pages 72-73.) Beckjord enclosed his caption notes and a clip from the Sunday *Seattle Times* of June 13 which focused on details of the investigation in a news feature written by William Gough of the *Times* staff. Following are excerpts:

"(Wayne) Long said the footprints were 1 to 1½ inches deep and the creature's strides measured 6 to 8 feet between steps.

"The officials also conducted a test with a truck to determine how much the creature weighed. They placed a metal plate in the shape of one of the footprints on the ground beside a footprint. Then, with the back wheels of the truck jacked up, about 5,000 pounds of pressure from the weight of the truck was applied to the plate. It sank a half inch into the ground.*

"Beckjord seems convinced that Bigfoot is real. And he figures that the creature would have to be heavier than 3,100 pounds, to leave footprints as deep as it did—a 2½-ton animal stalking the deep woods of the Northwest. 'This is an incredible weight,' he acknowledged, but 'it indicates that whatever it was, it was huge.'

"Wayne Long, almost convinced, said that though he is skeptical, the tracks left by whatever Freeman saw are 'awfully convincing. . . . Something made them. I don't think a man would make them. They just went into the ground too far. I've worked in the woods a long time and I've never seen tracks like this before. I've seen lots of bear tracks, but nothing like this.'

"Beckjord added: 'It might be something really weird, such as an alien, or it might be some type of robot, since the weight is beyond anything that could be biologically existing. Could it be, therefore, that Bigfoot might be some kind of mechanical 'it'?"

*The "Beckjord method" of estimating the weight of Sasquatches was used to good effect in his investigation. The method was fully described in Beckjord's illustrated report to SITU, published in the Spring 1980 issue of *Pursuit* (No. 50, pp. 67-71).

date of the catastrophic submergence was estimated at 15000-7000 B.C.²⁴

The junction of the Klickitat and Columbia rivers in the state of Washington is the site of other puzzling ruins which could be linked to the Lemurian mystery. According to an article published in 1881, a mysterious wall was found by a T. M. Whitcomb. The wall is five feet high and is a square enclosure filled with earth except for two squares in the middle. The two square pits are eight feet deep and 15 feet on a side. The structure is 200 feet on a side. Evidence for a former superstructure of wood atop the stonework was found. Clues to the age of the site seem to be lacking, but the remnants of charred wood and discovery of hundreds of stone arrowheads inside suggests that the building was attacked and burned, but who the attackers were and who lost the attempted defense may never be known.²⁵

We cannot be sure whether the many odd ruins that have been found along the American west coast are remains of Lemurians or of another civilization such as the legendary lost kingdom of Cibola which the Spanish conquistadors so vainly sought. If Lemuria was real, it probably was located elsewhere than along the western coast of the Americas. However, the Lemurians could have had colonies wherever the artifacts seem to indicate. My own theory about Lemuria will be discussed in the last part of this report.

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The third and final part of Jon Singer's article on Lemuria will appear in the next issue.

The Notes of Charles Fort

Deciphered by Carl J. Pabst

ABBREVIATIONS

★	For some obscure reason, Fort cut a notch on the right side of the note.	Jour. de St. Petersburg	<i>Journal de St. Petersburg</i>
★★	For some obscure reason, Fort cut a point on the left side of the note.	Jour. Roy Inst Gt. Brit (KBR)	<i>Journal of the Royal Institute of Great Britain</i> library call letters [?]
ab	about	lat	latitude
Ac to	According to	L.B.	Lady Birds
A. J. Sci	<i>American Journal of Science</i>	Liv. Age	<i>Living Age</i>
(A 1)	[? Almanac ?]	LT	<i>London Times</i>
Amer	American	Mag Nat Hist	<i>Magazine of Natural History</i>
An Phil	<i>Annals of Philosophy</i>	Metite	Meteorite
An Reg	<i>Annual Register</i>	mets	meteors
Arcana of Sci.	<i>Arcana of Science</i>	MWR	<i>Monthly Weather Review</i>
BA	<i>Report of the British Association for the Advancement of Science</i>	Myst dth	mysterious death
BCF	<i>The Books of Charles Fort</i>	N. England	New England
Belg.	Belgium	N.M.	No More
bet.	between	N to S.	North to South
Bib. Univ.	<i>Bibliographie Universelle</i>	N. W. Africa	Northwest Africa
Bull. Soc. Belge de Geol.	<i>Bulletin de la Societe Belgium de Geologique [?]</i>	Op. Mars	Opposition of Mars
(C)	[?]	p.	page
(C)	<i>Chaos</i> [Fort's working title for <i>New Lands</i>]	phe	phenomena
corr.	correspondent	Phil Nat. Gazette	<i>Philadelphia National Gazette</i>
C.R.	<i>Comptes Rendus</i>	P Ladies	Painted Ladies
D-75	<i>The Book of the Damned</i> , page 75	Pop. Astro.	<i>Popular Astronomy</i>
det. met.	detonating meteor	Pop Sci Rev	<i>Popular Science Review</i>
disap.	disappeared	Proc. Amer Phil. Soc.	<i>Proceedings of American Philosophical Society</i>
Edin J Sci	<i>Edinburgh Journal of Science</i>	q	earthquake
Edin New	<i>Edinburgh New Philosophical Journal</i>	Quar Jour Roy Inst	<i>Quarterly Journal of the Royal Institute</i>
E.N.E. to W.S.W.	East-Northeast to West-Southwest	Rept BA	<i>Report of the British Association for the Advancement of Science</i>
Eng	England	S.A.	South America
E. Siberia	Eastern Siberia	Sc Am Sup	<i>Scientific American Supplement</i>
ext. obj.	extraordinary object	Sci. Gazette.	<i>Scientific Gazette</i> [?]
(F)	<i>Fletcher's List</i>	Sumner Co., Tenn.	Sumner County, Tennessee
F. ball	Fireball	S.W. to N.E.	Southwest to Northeast
Gent. Magaz	<i>Gentleman's Magazine</i>	th stone	thunder stone
Gt Brit	Great Britain	th storm	thunder storm
h	hours	u. s. Col.	United States of Columbia
H House	Haunted House	V. Cardui	Vanessa Cardui
Ind.	Indiana	Vienna Museum of Nat. Hist.	Vienna Museum of Natural History
Inf. conjunction	Inferior conjunction	volc eruptions	volcanic eruptions
(It)	Italy	W.I.	West Indies
J. F. Inst	<i>Journal of the Franklin Institute</i>	wrms	worms
		W to E	West to East

Continued from Pursuit No. 56, Vol. 14, No. 4, Fourth Quarter 1981, page 192.

1824

Aug 17 / [London Times], 3-a / Comrie.

summer / D-84 / Fish / Fifeshire, Scotland / Wernerian Nat Hist Soc Trans 5/575.

★★

[BCF, p. 86 / See July, 1824.]

Aug 23 / Mendoza, Argentine / Fireball and meteoric dust / ac to Poggendorff / [Reverse side] BA 60.

Sept. 2 / 6 p.m. / In Leeds Mercury, Sept 11, a writer says a bog had burst and denies that the muddy deluge had come from the interior of the earth. He says that more water poured out than [Reverse side] the bog could have contained; so he thinks that a waterspout must have fallen upon

the bog. According to another cor., the highlands of the moors had

[Second page] opened into two chasms and the phe. was the effect of an earthquake. / This muddy water was of volume so great that factories along the River Aire had to suspend some of [Reverse side] their processes. / Sept. 18th, that the river remained turbid for 10 days—then another flood of black, boggy water from heavy rains raised river 18 inches. But these flows of

[Third page] boggy water had never occurred before. Place was 9 miles from Keighley and 6 from Colne—known as Crow Hill. Ground not described as a bog but [Reverse side] as a moor saturated with water so that it trembled under foot. Water drained from it in "small rivulets." The two "chasms" about the same size were each ab 1200 yards circumference and 4 to 6 yards deep. [Fourth page] Stones of "enormous size" were carried by the torrent. (This by the writer who

denies that water came from inside earth.)

Sept. 2 / At Haworth, near Leeds, Yorkshire, during th. storm, two chasms in a moor appeared and [Reverse side] from it a mixture of mud and water in a flood from 40 to 70 yards wide. / L.T., Sept 9-2-e / Clouds copper-colored. At Leeds the water of river Aire so discolored by this mud that the people could not use it.

Sept 3 / (Hun) / [London Times], 2-c / Fires and Storms in Hungary.

Sept 13 / St Petersburg / Fireball in daytime / BA 60.

Sept. 24 / Meleda / 205.

[BCF, p. 395:

September, 1824—the sounds of Melida.]

Sept / Pyrites / Orenburg, Russ. / (94).

some days before Sept 16 / Near Orenburg / Annales de Chimie 30-431 / //

[Reverse side] 88/7.

[September] / Orenburg / Some of these crystals are in the Vienna Museum of Nat. Hist. / Sc Am 81/343.

[BCF, p. 178:

We now have a commonplace datum that is familiar in two respects:

Little, symmetric objects of metal that fell at Orenburg, Russia, September, 1824 (*Phil. Mag.*, 4-8-463).

A second fall of these objects, at Orenburg, Russia, Jan. 25, 1825 (*Quar. Jour. Roy. Inst.*, 1828-1-447).

I now think of the disk of Tarbes, but when first I came upon these data I was impressed only with recurrence, because the objects of Orenburg were described as crystals of pyrites, or sulphate of iron. I had no notion of metallic objects that might have been shaped or molded by means other than crystallization, until I came to Arago's account of these occurrences (*Oeuvres*, 11-644). Here the analysis gives 70 per cent. red oxide of iron, and sulphur and loss by ignition 5 per cent. It seems to me acceptable that iron with considerably less than 5 per cent. sulphur in it is not iron pyrites—then little, rusty iron objects, shaped by some other means, have fallen, four months apart, at the same place. M. Arago expresses astonishment at this phenomenon of recurrence so familiar to us.]

Sept. 29 / Philippines / q / III / [Heavy / BA 1911].

Oct. 14 / Zembrak, Horzowitz, Bohemia / Metite / (F).

Oct 20 / Sterlitamak, Russia / iron pyrites in hail / BA 60.

Oct 20 / mets and hail / Nakratchine, Tobolsk / aerolites and

hailstones as large as [Reverse side] goose eggs / Mag Nat Hist 7-304.

Oct. 20 / Moon / 5 a.m. / by Gruithuisen / On dark part of moon, an illumination from the Sea of Clouds to lat Copernicus / said be 250 miles [bly 125 / [Reverse side] disap. / six minutes later, a pale light in southern extremity [of] the region—then from 5:30 until daybreak, pulsations like those of this earth / said be auroral / Flammarion, Pop. Astro, p. 195 / Sc Am Sup 7/2712.

[BCF, p. 395:

At five o'clock, morning of Oct. 20, 1824, a light was seen upon the dark part of the moon, by Gruithuisen. It disappeared. Six minutes later it appeared again, disappeared again, and then flashed intermittently, until 5:30 A.M., when sunrise ended the observations (*Sci. Amer. Sup.*, 7-2712). And, upon Jan. 22, 1825, again shone out the star-like light of Aristarchus, reported by the Rev. J. B. Emmett (*Annals of Philosophy*, 28-338).]

Oct 26 / Philippines / q / III / [Heavy / BA 1911].

Nov 13-14 / night / q and fireball / BA '54-162 / at Mayence.

Nov. 15 / Martinique / 3:30 p.m. / q / preceded by great heat which [Reverse side] ceased after shock, and heavy rain started and fell for 10 days / BA 54.

Nov. 16 / Bonn / Fireball / BA 60.

Nov. 27 / Prague / Fireball / BA 60.

Nov. 27 / Aerolite? / See Nov. 29, 1809.

Nov. 30 / 3:30 p.m. / q / Martinique, preceded by great heat which ceased with shock / BA 54.

Nov 30 / Cosenza, Calabria / q followed by heavy rain / BA 54.

Nov. 30 / In Antilles / violent q. / tremendous sound and torrents of rain though in dry season / [Reverse side] C.R. 16-1292.

Dec 6 / 2 p.m. / Shock / Portsmouth, England / An Reg '24-166.

Dec 8, etc. / By Parry, in J / a brilliant meteor / 7:15 p.m., Dec. 8 // Dec 9 / bet. 4 and 5 p.m. / another // Dec 12 / 5 meteors in 1/4 hour // Dec 14 / several // Parry, Journal of a Third Voyage, p. 72 / (KBR).

Dec 10 / Mans, France / Fireball / BA 60.

Dec 10 / [London Times] 10-2-c / 13-2-e / q / England.

Dec 10-11 / q / Italy (Cosenza) / II / [Medium / BA 1911].

Dec 12 / By Parry, at Port Bowen, in the Arctic / 5 mets in 1/4 hour / BA 76-152.

Dec. 15 / Magdeburg / Fireball / BA 60.

Dec 17 / Neuhaus, Bohemia / Ac to Boguslauski, a resinous substance fell [Reverse side] after a fireball. / BA 60.

Dec 17 / Resin (?) / Bohemia / D-75.

[BCF, p. 74:

A resinous substance that fell after a fireball? at Neuhaus, Bohemia, Dec. 17, 1824 (*Rept. Brit. Assoc.*, 1860-70).]

Dec 23 At Strasburg "an extraordinary bellowing sound in the air" bet 3 & 4 AM. At 5 a strong quake. BA '54. / [original note missing / copied from *The Fortean*, no. 8, p. 16, c. 1].

1825

Jan. 2 / 5 a.m. / Valderno, Italy / ext. obj. / (3) / Sci. Gazette. 1825/99 / [Reverse side] BA 60-70.

Jan 2 / Arezzo / Fireball / W to E / 2 a.m. / BA 60.

Jan. 2 / ab 5 a.m. / Tuscany / Great fireball and before and after many mets. / [Reverse side] A. J. Sci 2/33/290.

Jan 2 / 5 a.m. / Great abundance of meteor[s] / Italy / Nature 65-199.

Jan 2 / Morning shower of mets at Tuscany, Italy / Proc. Amer Phil. Soc. 13-501.

Jan 13 / Martinique / q and great heat up to moment of q. / BA 54.

Jan 16 / evening / Oriang, India / Metite / BA '60.

Jan 17 / Bromberg / Fireball / BA 60.

Jan 18, 21 / Iceland / q / II / [Medium / BA 1911].

Jan 19 / q — torrents / Violent q / Ionian Islands / immediately afterward a heavy shower of rain / An. Reg 25-8.

Jan 19 / Sand—600 miles off coast of Africa / Gent. Magaz, March, 1825.

Jan 19 / Greece and Albania / q / III / [Heavy / BA 1911] / St Maura, Greece.

Jan 22 / Light near Aristarchus / same as Kater's—by Rev. J. B. Emmett / An Phil 28/338.

[BCF, p. 395 / See Oct 20, 1824.]

Jan 24 / Konigsberg / Fireball / BA 60.

Jan 24 / Oaxaca, Mexico / q. / I / [Light / BA 1911].

Jan 25(?) / Pebbles / Orenburg, Russia / 94.

[BCF, p. 178 / See September, 1824.]

Feb 3 / Nurenborg / Fireball / BA 60.

Feb 4 / Cassell / Fireball / BA 60.

Feb 8, 12, 13, 15, 16, 18, 19, 22, 26, 28 / Meleda / BA '54.

Feb. 10 / (F) / Metite—Nanjemoy, Maryland / A. J. Sci 9-351 / ab noon /

[Reverse side] Concussions 25 miles away / was thought an earthquake. / See 1829.

[BCF, p. 395:

The last sounds of Melida of which I have record were heard in March, 1825. If these detonations did come from the sky, there was something that, for at least three years, was situated over, or was in some other way specially related to, this one small part of this earth's surface, subversively to all supposed principles of astronomy and geodesy. It is said that, to find out whether the sounds did come from the sky, or not, the Preteur of Melida went into underground caverns to listen. It is said that there the sounds could not be heard.]

March 2 / N. W. Africa / q. / III / [Heavy / BA 1911].

March 2-7 / Tremendous q's / Algiers / An Reg '25-26.

[Reverse side] 7,000 bodies dug out of wreck of one town—preceding it all wells had gone dry. / BA '11.

Ap 17 / Slight quakes, Lunroe, Norway / but great qs and volc eruptions, Java, Borneo, Celebes / BA 54.

May 9 / Wirtemberg / sic // Meteor "with detonation?" / BA '60-100.

May 12 / Hayden, Wiltshire / Metite? / BA, '60.

May 19 / 4 h / Venus / Inf. conjunction / (A 1).

June 14 / Volc / Goentoes, Java / N.M. / C.R. 70-878.

July 5 / (Fish) / During a violent rainstorm at Kingwood, N.J., a sunfish

[Reverse side] 4 inches long fell into a backyard. / Niles Weekly Register, Aug. 27.

July 5 / Spain / "Perhaps hailstones" / BA 60.

July 5 / (C) / Torrecilles de l[a] Campo, Spain / 2 p.m. / Many stones fell—said

[Reverse side] to have struck near 2 horses in fields. / Phipson, "Meteors," p. 44.

July 25 / at Marseilles / Comet discovered in Taurus / LT, Aug 9-2-c.

July 28 / Cherson, Russia / Metite / BA '60.

Aug 13 / by M. Hansteen / ab. 11 a.m. / ac fiel[d] of his telescope / a luminous point with a sinuous [Reverse side] movem[ent] thought not been a meteor—may been a bird / Arago, *Oeuvres* XI/575.

Aug 22 / Fireball / seen all over Holland / BA 60.

latter part of Aug. / ab 11 p.m. / Holland / blue light in / LT, Sept 26-2-f.

Sept 10 / Liancourt, France / Fireball / 2/3 moon / N.E. to S.W. / BA 60.

Sept 17-18 / night / New comet discovered at Amsterdam, in Taurus / L.T., Oct 1-2-d.

Sept 20 / Hanover / Fireball / BA 60.

Sept 20 / q. / Trinidad / BA '11/55.

Sept 20 / Trinidad, W.I. / q. / II / [Medium / BA 1911].

Sept 20 / Demerara / q and sudden gust of wind / BA 54.

Sept 24 / Leipzig / Fireball / BA 60.

Sept 26 / 2:20 p.m. / Chile / q. / A. J. Sci 2/12/420[or 426].

Sept 27 / Honolulu. / (F).

October / q / Persia / II / [Medium / BA 1911].

Oct 17 / Prague / Fireball / BA 60.

Oct 19 / Berlin / Fireball / BA 60.

Oct 22 / Hexter / Fireball / BA 60.

Oct 27 / Italy (Campobasso) / q / I / [light] / BA 1911].

Nov. / Great met / Ohio / BA 60.

Nov. 3 / L.T., Nov. 30, 1825 / Thionville, France / In a storm in the forest of Calenhoven, a cloud of fire that appeared in t[he] forest and then traversed [Reverse side] the horizon from north to south followed by profound darkness.

Nov 4 / Halle / Fireball / BA 54.

Nov 9 / Pils / F. Ball / [BA] '54.
Nov 14 / Leith / F. ball / [BA] 54.

Nov. 22 / A met train near the comet at Calcutta / BA '50-120 / E to W.

Dec. 1 / Berlin / F. ball / [BA] '54.

Dec. 1 / (Ch) / Luminous body, size moon / Berlin / disap. / no change place / C-30+ / Arago, Oeuvres 2/575 /// [Reverse side] A 9[?] [stamped].

Dec 5 / q. / China / II [Medium / BA 1911].

Dec 10 / Halle / F. ball / [BA] '54.

Dec 10 / Cosenza, Italy / q. / II [Medium] / BA '11.

Dec 18 / Frankfort-on-Main / F. ball / [BA] '54.

Dec 23 / 5 a.m. / q. / Strasburg, etc. / "An extraordinary bellowing sound

[Reverse side] had been heard in the air between 3 and 4 a.m. / BA '54.

Dec 23 / At Strasburg, "an extraordinary bellowing sound in the

air," bet 3 and 4 a.m. At 5, a strong q. / BA 54.

[BCF, pp. 431-432 / See 1821 //.]

1826

Jan 26 / Albania / I / [Light quake / BA 1911].

Feb 1 / In the Basilica[ta], Italy / q / II / [Medium / BA 1911].

Feb 1 / afternoon / After almost unbearable heat at Naples, etc., and smoke, several days from Vesuvius, a q. / [Reverse side] BA 54.

Feb 1 / Naples / Weather been cold and rainy, up to Jan. 29. On first of Feb,

[Reverse side] almost unbearable heat set-in and smoke from Vesuvius and q that threw down houses. / BA 54.

Feb 1 / It / phe and q? / See 1805.

Feb 14 / La Manche / F. ball / [BA] 60.

Feb. 15 / (It) / Lugano, Italy / det. met. / BA, '60.

Last of Feb or first of March / Heavy rains and floods in Kansas / MWR 34-579.

March / Fall of dust ab 600 miles w. of Cape Verde / [Reverse side] Nautical Magazine 1-291.

March, end of / See June. / Papilio Cardui / Air at Turin filled with them. Most numerous on 29th of March. On

[Reverse side] leaving Turin they flew in a mass northward. / Bib. Univ., Aug, 1827 / A. J. Sci 14-387.

March 31 / N. England / great met / 7:30 p.m. / A. J. Sci 11/184.

March 31 / 7:30 p.m. / Ap 1—9 p.m. / New Haven, etc.—great mets / one a detonating / Am J. Sci 11/373 / [Reverse side] right date / but see 1837.

Ap 1 / Great met. / Vermont, etc. / Detonations / ab. 9 p.m. / A. J. Sci 11/184.

Ap. 1 / Saarbruck / grayish object / (D-275).

★ ★

[BCF, pp. 287-288:

"Most extraordinary and singular phenomenon," North Wales, Aug. 26, 1894; a disk from which projected an orange-colored body that looked like "an elongated flatfish," reported by Admiral Ommanney (*Nature*, 50-524); disk from which projected a hook-like form, India, about 1838; diagram of it given; disk about size of the moon, but brighter than the moon; visible about twenty minutes; by G. Pettit, in Prof. Baden-Powell's Catalogue (*Rept. Brit. Assoc.*, 1849); very brilliant hook-like form, seen in the sky at

Poland, Trumbull Co., Ohio, during the stream of meteors, of 1833; visible more than an hour; large luminous body, almost stationary "for a time"; shaped like a square table; Niagara Falls, Nov. 13, 1833 (*Amer. Jour. Sci.*, 1-25-391); something described as a bright white cloud, at night, Nov. 3, 1886, at Hamar, Norway; from it were emitted brilliant rays of light; drifted across the sky; "retained throughout its original form" (*Nature*, Dec. 16, 1886-158); thing with an oval nucleus, and streamers with dark bands and lines very suggestive of structure; New Zealand, May 4, 1888 (*Nature*, 42-402); luminous object, size of full moon, visible an hour and a half, Chili, Nov. 5, 1883 (*Comptes Rendus*, 103-682); bright object near sun, Dec. 21, 1882 (*Knowledge*, 3-13); light that looked like a great flame, far out at sea, off Ryook Phyoo, Dec. 2, 1845 (*London Roy. Soc. Proc.*, 5-627); something like a gigantic trumpet, suspended, vertical, oscillating gently, visible five or six minutes, length estimated at 425 feet, at Oaxaca, Mexico, July 6, 1874 (*Sci. Am. Sup.*, 6-2365); two luminous bodies, seemingly united, visible five or six minutes, June 3, 1898 (*La Nature*, 1898-1-127); thing with a tail, crossing moon, transit half a minute, Sept. 26, 1870 (*London Times*, Sept. 30, 1870); object four or five times size of moon, moving slowly across sky, Nov. 1, 1885, near Adrianople (*L'Astronomie*, 1886-309); large body, colored red, moving slowly, visible 15 minutes, reported by Coggia, Marseilles, Aug. 1, 1871 (*Chem. News*, 24-193); details of this observation, and similar observation by Guillemin, and other instances by de Fonville (*Comptes Rendus*, 73-297, 755); thing that was large and that was stationary twice in seven minutes, Oxford, Nov. 19, 1847; listed by Lowe (*Rec. Sci.*, 1-136); grayish object that looked to be about three and a half feet long, rapidly approaching the earth at Saarbruck, April 1, 1826; sound like thunder; object expanding like a sheet (*Am. Jour. Sci.*, 1-26-133; *Quar. Jour. Roy. Inst.*, 24-488); report by an astronomer, N. S. Drayton, upon an object duration of which seemed to him extraordinary; duration three-quarters of a minute, Jersey City, July 6, 1882 (*Sci. Amer.*, 47-53); object like a comet, but with proper motion of 10 degrees an hour; visible one hour; reported by Purine and Glancy from the Cordoba Observatory, Argentina, March 14, 1916 (*Sci. Amer.*, 115-493); something like a signal light, reported by Glaisher, Oct. 4, 1844; bright as Jupiter, "sending

THE HUDSON RIVER MONSTER OF 1891 (A Fort Notes 'Special')

Sept. 13 / [+] Troy / while hunting along Hudson River, near Albany, Michael Griffa, an Italian storekeeper of Troy, saw an animal swimming in the river. Shot it and brought it to Troy. "It is (ab) 2 feet long and its back is covered with coarse hair. The underside is the [Reverse side] color of human flesh and the features and trunk bear a striking resemblance to a female child. It has a well-developed chest and breastbone. There are wings measuring 20 inches from tip to tip, four legs, two fins and a tail somewhat resembling a pig's. Several doctors have examined it [2nd page] but are at a loss to place it. The monstrosity has been placed in alcohol and will be sent to the Smithsonian Institution in Washington. [Reverse side] As it hangs against the wall at Griffa's, with the underside exposed, the visitor is impressed with the grotesque human features." / Sun 14-3-2. /

out quick flickering waves of light" (*Year Book of Facts*, 1845-278.)

Ap. 5 / 6 a.m. / off coast of Florida / Waterspout / A. J. Sci 14-171.

Ap. 7 / [London Times], 3-c / Aurora / Cupar.

April 12, 13 / Moon / by Rev. J. B. Emmett / near Boroughbridge, Eng / very conspicuous black cloud

[Reverse side] or cloudy appearance / Annals of Phil 28/81.

Ap. 14 / 11:20 p.m. / Vermont / great met / size of sun / A. J. Sci 11/120.

Ap. 21 / [London Times], 4-b / q / Tornea / Eng?

Ap 29 / [London Times], 3-a / Comet at Palermo.

May 4 / Op. Mars / (A 1).

May 15 / Jamaica / fireball—and ferruginous mass found? / BA 67-415.

May 17 / Granada, Spain / q. / I / [light / BA 1911].

May 17 / Bogota, U.S. Col. / violent q., "preceded by long-continued drought, and [Reverse side] immediate[ly] followed by very heavy rain / BA 54.

May 19 / (F) / at Ekaterinosloff / Stones fell. Principal mass in museum at Odessa. / BA 60.

(To be continued)

THE SOCIETY FOR THE INVESTIGATION OF THE UNEXPLAINED

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ORIGINS OF SITU/PURSUIT

Zoologist, biologist, botanist and geologist Ivan T. Sanderson, F.L.S., F.R.G.S., F.Z.S., in association with a number of other distinguished authors, established in 1965 a "foundation" for the exposition and research of the paranormal—those "disquieting mysteries of the natural world" to which they had devoted much of their investigative lifetimes.

As a means of persuading other professionals, and non-professionals having interests similar to their own, to enlist in an uncommon cause, the steering group decided to publish a newsletter. The first issue came out in May 1967. The response, though not overwhelming, was sufficient to reassure the founding fathers that public interest in the what, why and where of their work would indeed survive them.

Newsletter No. 2, dated March 1968, announced new plans for the Sanderson foundation: a structure larger than its architects had first envisioned was to be built upon it, the whole to be called the Society for the Investigation of The Unexplained, as set forth in documents filed with the New Jersey Secretary of State. The choice of name was prophetic, for Dr. Sanderson titled one of the last of his two-dozen books "Investigating the Unexplained," published in 1972 and dedicated to the Society.

Another publication was issued in June 1968, but "newsletter" was now a subtitle; above it the name *Pursuit* was displayed for the first time. Vol. 1, No. 4 in September 1968 ("incorporating the fourth Society newsletter") noted that "the abbreviation SITU has now been formally adopted as the designation of our Society." Issue number 4 moreover introduced the Scientific Advisory Board, listing the names and affiliations of the advisors. Administrative matters no longer dominated the contents; these were relegated to the last four of the twenty pages. Most of the issue was given over to investigative reporting on phenomena such as "a great armadillo (6 feet long, 3 feet high) said to have been captured in Argentina"—the instant transportation of solid objects "from one place to another and even through solids"—the attack on the famed University of Colorado UFO Project headed by Dr. Edward U. Condon—and some updated information about "ringing rocks" and "stone spheres."

Thus SITU was born, and thus *Pursuit* began to chronicle our Investigation of The Unexplained.

821009

B

Prehistoric Nuclear Weaponry?

In the presence of the immense terror that I spread, like that of Anna, who holds his head high? I am the master. The steep mountains of the earth are shaken violently from their peaks to their foundations. . . . In my right hand I hold my disc of fire. In my left hand I hold my disc that slays. I hold the raised weapon of my divinity, the fifty-spoked solar wheel. I hold the potent breaker of mountains, the solar wheel which cannot be deflected. I hold the mighty weapon which slays like a sword whole circles of warriors. I hold the fish with seven blades that makes the mountains bow. I hold the flaming blade of battle that devastates the rebel country. I hold the great sword which lays low the ranks of heroes, the sword of my divinity. I hold the deadly lance which is the hero's joy. I hold the noose which catches men and the bow that shoots lightning. I hold the hammer which smashes the houses of the rebel country, and the shield. I hold the lightning in battle, the weapon with fifty points. I hold the . . . seven-headed like an enormous seven-headed snake. Like the attack of a great sea-serpent . . . devastating in the shock of battle, I hold the seven-headed weapon whose power extends across the sky as well as across the earth. I hold the weapon that shines like the sun, like the god burning in the east. I hold the creator of heaven and earth, the god of fire who has no equal. I hold in my right hand the potency of the weapon which spreads panic terror through the land, the projectile of marble and gold . . . which works by the power of the life-giving god in his miracles. I hold the weapon like . . . which destroys the rebel land, the weapon with fifty points.



The original of the above text appears in "Cuneiform Inscriptions of Western Asia" by Sir Henry Rawlinson, published in London in 1866, reference number II, 19. SITU member George Andrews translated it into English from the French translation which appeared in "La Magie chez les Chaldeens" by Francois Lenormant, published by Maisonneuve, Paris, in 1874.