

Pursuit

'Science is the Pursuit of the Unexplained'

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The Unexplained



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Approximate size and configuration of the Sampson County Mystery Animal track. This is supposedly a left-forefoot print reconstructed from a photograph of the actual track. Note the lack of claw marks, the rather even spacing of the toes, and the distortion of the pad to the right, as if the animal had been pushing toward the left when it made this print. Compare with description of hyena spoor. See pages 149-151.

THE SOCIETY FOR THE INVESTIGATION OF THE UNEXPLAINED

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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

Pursuit

SOCIETY FOR THE
INVESTIGATION OF
THE
UNEXPLAINED

'SCIENCE IS THE PURSUIT OF THE UNEXPLAINED'

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Cover: Track of the Sampson County Mystery
Animal, reconstructed by Paul B. Thompson.

The publisher asked:

"What's the most important article in this issue?"
"I don't know," replied the production editor,
"but we've sure got plenty of variety."

After eyeballing the Contents page and thumbing through the ensuing 47 pages, most readers will probably agree with that assessment.

The geographical variety ranges from North Carolina to West Virginia, then to Mexico, Germany, France, elsewhere in Europe, on to the Near East, Far East and India; even to the Lost Atlantis, wherever that may be.

There is topical variety, too, in Chris Bird's innovative consideration of one of civilization's least-understood resources: water. Looks-back are paired with looks-ahead: the Maria Frauen Recollections that reveal her exotic but apparently effective practice of medical dowsing in 19th-century Germany; and Paul Thompson's report on the Medusa cell, with the positive implications it holds for the treatment of malignant disease.

In the mountains of northeastern Mexico, George Agogino found reason to wonder how any people, whatever their lack of education, could be so misled as to resurrect an ancient rite of human sacrifice only twenty years ago. But in south-central Mexico, less than two years ago, a reputable businessman and his son felt wonder of a different sort as they watched a formation of UFOs overfly their home, only six blocks from the Sheraton Hotel in downtown Guadalajara, one of Mexico's largest cities.

Preceding all this is a page that bears the title **Symposium**, which formerly headed the section of our journal reserved for letters to the editor. Originally, **Symposium** was intended to be a forum wherein members could discuss, in non-technical terms, their personal impressions of the Unexplained world, without putting academic credibility at risk, as an "unorthodox article" might, or inviting severe abbreviation, as a lengthy "letter to the editor" could.

Evan Hansen, in his letter on the next page, is the "first speaker on the program" for our renewed **Symposium**. We hope for good attendance, and we invite others to raise their hands to ask questions and take part in the lively discussions that we hope will follow.

—The editors

Symposium

Drift, Rift, and the Remarkable Human Footprint Discovered in Cambrian Rock

After I had renewed my membership, a notice was received inviting members to submit their personal research. I seem always to be involved in a half-dozen far-out projects, at least half of which may be interesting enough to attract others to participation. I'm a farmer, which means in the summer I'm often so busy that I don't even have time to sit down to eat. But winter gives me a lot of free time, which I use for whatever interests me at the time. My greatest pleasure in life is collecting material that bugs the self-anointed "experts." Let me describe a few things I'm involved in, and this is an open invitation to all others who may care to join me in studying them.

First, is anyone interested in the study of continental drift? I became interested in geothermal activity back in 1974 and have spent most of my spare time and money on this study ever since. In my opinion, the local geology in this valley where I live is the most interesting of any in America. Anyone who understands continental drift is aware of the mid-oceanic rifts that circle the whole planet. The biggest one starts under the Mideast—Syria or Turkey—and crossing Israel, forms the Red Sea, continues across the Pacific, and enters land in Mexico where it splits Baja California away from the Mexican mainland. Here conventional geology loses it. Some say the San Andreas Fault is the extension of it, but this fault has a right-lateral slip instead of rifting; which proves it's only a transform fault. The actual rift goes inland, roughly following the Colorado River until it hits Utah. It passes within ten miles of my farm, running in a line between Newcastle to Lund, and farther on both north and south. The line is creeping all the time, in some places moving as much as a foot in a year. I put stakes across a single earth-crack and measured four inches of spread in less than a year.

You may remember, when Carter decided on mobile deployment of the MX missile, Beryl was selected as the first choice for the primary operating base. Naturally, I didn't want that monstrosity in my backyard, so I started raising hell about building it on some of the most unstable land in America. I was able to get the first choice of base sites moved from Beryl to Coyote Spring, Nevada, while Carter was still President. Last March, KSL-TV gave my work 15 minutes' coverage on their "Dimension Five" feature. I don't know to what extent my effort helped to stop MX, but the effort was considerable.

Anyway, with MX dead (I hope), public interest in the activity along this rift has ended. But the movements are still going on. So if anyone is interested in basic research about earth movements along this rift, there is an open invitation to come for a visit and see what I've located.

This rift keeps our fault lines open enough for water to reach the heat in the interior of the Earth, which gives this valley some of the best geothermal heat of any place in the country. Just before Christmas, Union

Oil put down a test-well at Newcastle. The editor of the local newspaper is my closest neighbor, and he sent an attractive girl reporter to interview the drill crew. The information is confidential so he couldn't publish it, but he told me the results: By 1,000 feet they had 500 degrees; by 2,000 the pressure was so high they feared a blowout, and had to switch their drilling mud from bentonite to barium in the hope that the greater weight of the barium would hold it down. By the time they quit at 3,000 feet, temperatures were over 600 degrees. Union Oil now has plans to drill a second test-hole farther out in the valley, and if it holds true (which it will) they will proceed with a production well. (Anyone concerned with geothermal heat is invited to see my work on the subject.)

The thing that made me get serious about geology was when I found proof that Noah's flood actually happened. I started farming in 1968, and for 12 years I flood-irrigated out of open ditches. There is no better way to learn the laws of physics that govern erosion and deposition of sediment. It was a simple matter to transfer my observations of irrigation ditches to what I see around me in the mountains. I have enjoyed just bumming around the mountains ever since I was old enough to get out from my mother's eyesight.

One day, a friend who was visiting started discussing whether Noah's flood actually happened. To prove that it did, we went to look at an irrigation channel I had located years earlier. He had to admit that a channel of that size could be caused by nothing less than a catastrophic flood, which provoked us to an attempt to calculate the rainfall. As our investigation progressed, we found that this area had turned into desert immediately after the flood ended, thereby preserving about 98% of the evidence. The final stage of the flood was marked by rainfall at a rate of at least 10 inches per hour.

The channel had rocks constricting it to 200 yards in width, at a point where erosion marks on the rocks showed a depth of 20-25 feet. It widened at other points but there was no means of measuring depth. The slope is 100 feet to the mile and the area drained is approximately 90 square miles. Every drainage channel leading into this valley is roughly in the same proportion. For example, one channel that drains an area 8x12 miles is 200 yards wide and carried rocks as big as a ton a distance of 500 yards past the mouth of the channel, into the standing water of the lake.

In a watershed that drains an area of 90 square miles, the flow hit a hill of ignimbrite rock. This rock is so brittle that it shatters on impact, yet it is hard enough to scratch glass and would therefore resist abrasion. The flow was strong enough to cut a hole in the solid ignimbrite to a depth of 35 yards, carving a channel 150 yards wide. I find similar evidence wherever I look.

The story as I have reconstructed it up to this time is simple: The flood hit at the close of the Ice Age. The



**Cast of Human Footprint
With Trilobites—Said
To Have Been Found
In Cambrian* Rock
By W. J. Meister**

*The Cambrian was the earliest period of the Paleozoic era and was "characterized by rocks formed under shallow-sea conditions (limestone, sandstone, shales) and by invertebrates such as trilobites," according to one dictionary.



(Excerpts from a brief report by Melvin A. Cook on his examination of the Meister specimen described in Evan Hansen's letter. Dr. Cook is professor of metallurgy at the University of Utah.)

Early in June 1968 I was introduced to Mr. Meister by Burton Tew, research scientist, Baccus Works, Hercules Incorporated. Mr. Meister had with him a most remarkable fossil specimen of a human footprint embedded in which were two very distinct trilobites and several smaller, less distinct ones.

The specimen comprised two approximately inch-thick slabs displayed in a plaster-of-paris cast. One slab contained the footprint and its associated trilobites and the other its mold. The footprint was that of the right foot of a human wearing a sandal. The rock in which the print was impressed was obviously natural, genuine, and characteristic rock. . . .

While I am by no means an authority on fossils

and footprints, the Meister specimen seems to me clearly to speak for itself. Even aside from any doubt as to the identity of the formation in which the discovery was made, it is a serious contradiction of conventional geology. That is, the feature of this specimen is the *intimate simultaneous* occurrence of modern (sandal-shod) men with trilobites. Furthermore, no intellectually honest individual examining this specimen can reasonably deny its genuine appearance. . . .

—Melvin A. Cook

Dr. Cook's complete report together with an article by Mr. Meister was published in the December 1968 issue of Creation Research Society Quarterly.

same catastrophe that changed the Pleistocene to the modern also caused the flood. The Ice Ages were not colder than the present; but the polar axis shifted about 1,000 miles and the sudden melting of the ice cap was the cause of the flood.

At that time Utah was nearly all under water. Lake Bonneville is the vestigial remainder. There was an overflow into the Snake River in Idaho that limited the top water level to an elevation of 5140 feet above sea level. The "East Bench" in Salt Lake valley is the terrace line of that level. It was raised to about 5200 feet by iso-

static rebound, but where the lake was too shallow for rebound, the 5140 level still held true. "East Bench" is very well defined, but why is there no "west bench"? Nowhere on the western mountains is the 5140 terrace found! My evidence to date indicates that a sudden surge of water from the northwest buried the terrace line. The few fragments of terrace that do remain are below mountain peaks so high that they would have protected the spot from such a surge.

The lake level rose to about 6000 feet for a brief time but it soon fell to a 5400-foot level. Rainfall of about

10 inches per hour eroded the line and posed the question whether the 6000-foot level was reached in two stages of a single flood, or did an earlier flood leave remnants at 6000 feet? I have found evidence pointing both ways. In any case, the rainfall was sufficient to hold the lake level at 5400 feet for an unmistakable stand line to form at that elevation.

The "extra" 260 feet of water running through the outlet cut it to its present level of 4800 feet. When the rain suddenly quit, the lake level fell, and from that point down the water just evaporated. The 4800-foot line, as well as all lower stand lines, are seen equally on the east and west.

There are easily distinguished differences between a terrace formed by deposition and one cut by wave erosion. A deposition terrace is convex in shape; a wave-cut terrace is concave. Anyone interested should dig a hole during a heavy rain, watch it fill, and note how the deposition terrace forms; then, after the rain when the wind comes up and makes waves, watch how the waves cut a different-shaped line.

The 5140-foot level, the 5400-foot and 6000-foot levels are all deposition formations. The 4800-foot level and all lower levels are wave-cut. Another indicator of the amount of water involved is the size of the rock particles that are moved by the water. Most texts on floods tell only that more water moves more sediment in a shorter time; I have read nothing about the most important aspect, namely, that more water moves bigger rocks. Silt and sand can be moved by even ordinary rainfall, but when you see rocks as big as a fist or a head, you may be sure a flash flood hit. So how do you explain rocks as big as a car that are found miles into the valley, past the mouth of the nearest canyon? No way can even the biggest flash floods move rocks as big as a car!

In my part of the state there is an almost invariable ratio of 1:10 between the size of the modern channel and the old one. If the modern channel is 20 yards wide it will be inside one 200 yards wide. This means that the amount of water that cut the old channel was more than 100 times the amount in the heaviest flash floods that have since occurred.

The spectacular scenery of eastern Utah and northern Arizona is the result of the Colorado River being too small to carry the water coming in. The Kaibab Mountain formed a dam which was breached to create the Grand Canyon. Despite being cut to a depth of one mile and a width of five miles, the canyon disgorged the water across what is now the Navaho Indian Reservation to a width of 100 miles. This wide flow allowed the high ground to protrude as islands, forcing all the water into channels on lower ground. As erosion cut the channels ever wider, the islands became smaller. The result: Monument Valley and all the other mesas and pinnacles we marvel at.

The toughest problem in this study is that the good evidence is just too big to see. The Nebraska Sandhills offer a perfect example. They have been known for over a century, but until 1972, when the first satellite photos became available, it was impossible to get far enough away from them to see that they are flood ripples. Small flood ripples that are only inches apart are familiar to most people, but when the ripples are more than five miles apart from crest to crest, the similarity is just too

big to see. If you can get a look at a satellite photo of the Nebraska-South Dakota region, you will see for yourself that the Sandhills are indeed flood ripples.

The Scablands of Washington state were also admitted to be flood-caused when satellite photos became available. The official explanation was that an ice dam which blocked a lake suddenly ruptured and caused the lake to drain in matter of hours. But the official figures contradict the official conclusion. Lake Missoula held 500 cubic miles of water. Only 150 cu. mi. was available for instant release, the rest being in back of an eddied narrows which would limit the rest to the capacity of the narrows. The water had to cross the Scablands, an area 100 miles wide and 150 miles long. It then drained into the Columbia River through Wallula Gap. The gap was large enough to allow a cubic mile of water to pass in about 70 minutes, yet it constricted the flow until 260 cu. mi. of water had ponded up in back of the gap. How could 260 cu. mi. pond up, if only 150 was available for instant release and it had to cross 150,000 square miles to get there? Even a casual examination suggests that at least ten times the volume of Lake Missoula would be required to accomplish the feat.

Isn't it a peculiar coincidence that Lake Bonneville drained into the Snake River, Lake Missoula cut the Scablands, and Lake Agassiz drained across the Nebraska Sandhills *at the same time*? All without a catastrophe like Noah's flood? And isn't it curious that photos made by satellite over the Mideast and North Africa show flood ripples even bigger than those in Nebraska? Of course, the Southern Hemisphere was much less affected, and large land areas show no such marks. This explains why Pleistocene animals survived in Africa and South America and also partly explains the unique animals found in Australia.

One more item. In 1968 a man named Bill Meister* was digging trilobite fossils west of Delta, Utah. He broke open a rock and found himself looking at the print of a human shoe. The news got on TV; I contacted Bill, and had a look myself.

I ran a shoe-repair shop for eleven years, and if there is one subject on which I am an authority, it is how a worn shoe looks. This print is absolutely authentic. The wearer of that shoe was just as human as anything walking the Earth today. It cannot be a hoax. One trilobite had been stepped on, and it had curled up for protection just as modern bugs do when crushed. The print is of the right foot. It measures 10¼ inches long, 3½ inches wide at the ball of the foot, and 3 inches wide at the heel which is ¼-inch thick and worn down on the outer edge just as our own heels tend to wear down. The mud at the toe appears cracked from the wearer's pushing off to take the next step.

I spent a couple of trips with Bill, digging for more, so I know, within a couple of feet, the exact spot where the print was found. I made a 35mm slide to mark the spot in order to locate it later. Peeling the rock a layer at

(Continued on page 183)

*William J. Meister, Sr. is drafting supervisor at the Baccus Works of Hercules Incorporated, Utah. In response to our request he sent a color transparency from which the accompanying conversion was made. He also sent a copy of the *Creative Research Society Quarterly* in which Dr. Melvin Cook's report on the Meister specimen was first published.

—Editor

The Sampson County Mystery Animal

by Paul B. Thompson

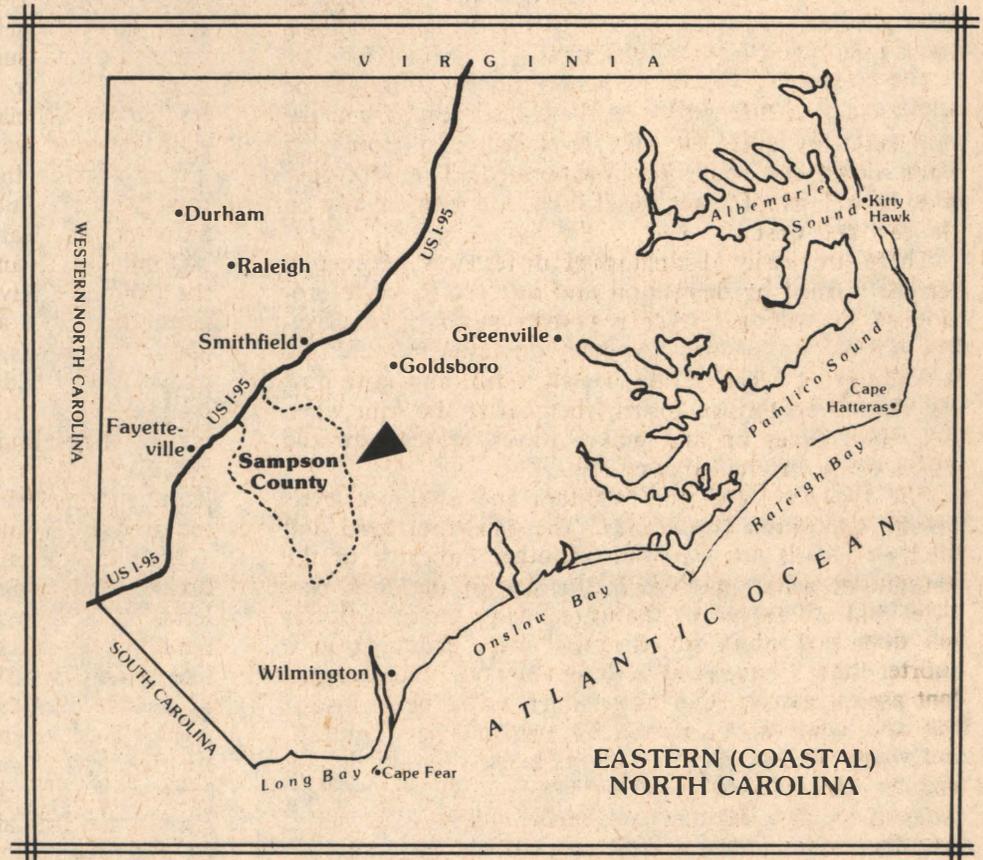
FOR TWO MONTHS during 1977 a rural area in Sampson County, North Carolina, was plagued by an unseen predator whose savagery inflicted severe damage to property and caused the wanton death of numerous household pets. The unsolved case of the Sampson County Mystery Animal (so named by the press¹) offers some interesting points of comparison with the monstrous incidents reported this year from Knox County, Indiana (Pursuit No. 55, Third Quarter 1981, page 138) and from Sussex County, New Jersey in 1977 (Pursuit No. 40, Fall 1977, pages 124-127).

Toward the end of April 1977, residents of the Herring Community began to notice signs of strange nocturnal goings-on. Pet cats were found mangled and ripped apart by some powerful enemy. Porch screens and other outdoor fixtures were being torn apart or crushed by incredible force. What was responsible for these acts of vandalism—which followed no discernible pattern?

On May 4, 1977 a large dog was found in a ditch in the same area, dead. The cause of death was obvious: the dog had been “shredded.”² Whatever was powerful enough to kill a large, healthy animal in such brutal fashion was more than sufficient to spread a chill of anxiety throughout the area. Residents began to keep ears and eyes open at night for some clue to the identity of the nocturnal intruder.

Anxiety changed to outrage and fear when an unoccupied mobile home was extensively damaged. Large chunks of the sub-flooring were ripped out from beneath a trailer owned by Mrs. Johnsie Phillips, and numerous pipes and wires were dislodged. Mrs. Phillips was not in the trailer when the attack took place on the night of May 17. She was staying with her father, Robert Strickland, whose home was only a few yards distant from her trailer.

Not far from the despoiled vehicle the body of a large cat was found; it had been thoroughly mangled. The Stricklands and Phillipses also discovered one (and only one) suspicious footprint in soft soil near the trailer. The print measured seven inches in length by five inches at its widest point. In general



appearance it resembled an oversize canine track.

Alarmed by the damage, and the threatening presence of the footprint, the Phillipses and Stricklands summoned the authorities. Members of the county Sheriff's Department and the North Carolina Wildlife Service responded. Interviews with the families disclosed that they had heard some strange noises during the night.

"It sounded kinda like something laughing," Mrs. Phillips said. "The noise came from all different areas . . . it was a real strange noise."³ Mr. Strickland, her father, had gone outside at midnight to investigate the disturbance.

"I banged on the side of the trailer and tried to get whatever it was to come out," Strickland said, "but it wouldn't. I don't know what it was but it was sure raising some kinda ruckus. I don't know what it is . . . I could be wrong, but I think it's a bear. If it's a dog, he's sure a big one."⁴ First opinions of both Detective Ronnie Alderman and Wildlife Protector Foster Harrell pointed to a large dog, a bobcat, or possibly a bear

as the culprit, but none of these ideas received much support from any evidence gathered at the scene.

News of the attack on the Phillips trailer circulated quickly, and on the 19th of May *The Sampson Independent* asked the obvious question in a headline: "Bigfoot on Loose?"⁵ Because no one had actually seen the marauder, the assumption that "It" was somehow related to Bigfoot and his kind subsequently affected all further consideration of the Mystery Animal by the media, the public, and the local authorities.

After the initial publicity had subsided a bit, a 13-year-old boy claimed he'd spotted a strange creature while riding his motorbike on a wooded path near Highway 55, some distance from the area of the earlier incidents but still in Sampson County. On two occasions, the boy said, he had observed a "large, dark, hairy" figure standing by the edge of the woods near the path. The exact dates of these sightings was not noted in the boy's report to the local paper, which nevertheless decided to take his alleged experience seriously. "Bigfoot Moving Around," warned

a headline in the issue published on May 20.⁶ Next day, the Sampson County Mystery Animal made it onto the Associated Press news wires.

As of May 21, the killer's toll included fifteen cats torn up, one dog shredded, assorted porch screens ripped apart, a trailer home seriously damaged, and a postscript of numerous tracks left at the sites. While citizens argued over the merits of the Bigfoot theory, the quoted opinion of Deputy Sheriff Thomas Tanner was that the Mystery Animal was either "a small bear or a bobcat."⁷ Foster Harrell, the Wildlife Protector, reported that several hunters had begun making night patrols with hunting dogs in an effort to track down the elusive creature; unsurprisingly, their efforts came to naught.

Speculation among those not buying the bear-or-bobcat theory continued to focus on the Bigfoot concept. A columnist and reporter for the *Independent*, Johnny Merritt, received and published a letter from Ronald Oates, a student at Lakewood High School, who said he was a member of the Oregon-based Project Bigfoot organization. Oates described Bigfoot as a scientifically recognized animal (with purported migratory routes) and a Latin name, *Homo Nocturnus* (?). After discussing the "pro" side of Bigfoot's existence, young Oates wisely added: "It is highly improbable that the animal which is responsible for the damage mentioned in your (Merritt's) article is a specimen of the Bigfoot race . . . the probable culprit is a large canine."⁸

Oates also disposed of the Eastern cougar as a candidate by simply comparing the configuration of cougar tracks with the Mystery Animal's prints. This commonsense method (which does not seem to have been followed in similar cases elsewhere) might have shed considerable light on the identity of the Mystery Animal, had it been vigorously pursued.

But old-timers in the Herring Community were not impressed by the publicity about Bigfoot. One of them, "Big Jim," put the weight of his experience on the side of "sensible folks."

"I've spent a good part of thirty-seven years in the woods and I know what I'm talking about," said Jim. "This ain't nothing but a dog."⁹

The activity of the Mystery Animal tapered off in late May and was nearly forgotten when It returned to the scene of Its earlier and most destructive visit of May 17. On June 7, a Tuesday, the

now-familiar tracks were found near the home of Lumus Strickland, scarcely 1,000 yards from Mrs. Phillips' trailer. A barn on the Strickland property was found to have been damaged. Two one-by-six boards nearly eight feet long had been ripped off the side of the structure. A storage shed close by was slightly damaged; numerous scratches were evident, and people who came to look at them agreed that they had to be the marks of the Animal's teeth or claws. Once again, deputies and Wildlife agents were called out, but no new explanations were forthcoming. The conservative consensus was that a large dog was to blame. One of the officers, who did not want his name used, asked columnist Merritt "not to call It Bigfoot . . . I've already had enough calls about Bigfoot."¹⁰

As June progressed, the Mystery Animal disappeared from the news, having apparently crept back into whatever hole It had emerged from in April. If there were any more incidents, they were not reported.

Evaluating the Sampson County Case

The pivotal question still unanswered about the Mystery Animal is: What was It? The mundane explanations tendered by the Sheriff's Department and the Wildlife Service can only be dismissed as having fallen way short of the mark. Plainly, it was not a bear. The flat, five-toed prints left by the brown bear are so unlike the Mystery Animal's tracks that no comparison is justifiable. (See illustrations on next page and reconstruction of the Sampson County track on front cover.)

The tracks and *modus operandi* of the Mystery Animal also eliminate the bobcat as a suspect. Speaking as one who grew up in the country, where my family kept a small stock of poultry, I can say that there is no mistaking the ravages of a bobcat. Bobcats are noisy, distinctive, and usually continue their nefarious ways until they are killed or driven off. The country people who live in Sampson County also know quite a lot about bobcats; such an active one could hardly have escaped identification and death or banishment.

Was it a "big dog"? Here I must hedge. Although I have never heard of a dog, wild or tame, that behaved like the Mystery Animal, made laughing sounds, or mutilated cats, such a hypothetical canine is more improbable than impossible. One can only wonder where

the supposed "big dog" came from and where it went at the conclusion of its two-month terror-trip.

Having discarded the ordinary, what remains is the extraordinary. A prominent feature of the case was the killing of pets in the area where the creature prowled.¹¹ No evidence was turned up that the victims were ever *eaten*; instead, the cats and dog slaughtered by the Mystery Animal seem to show only that the creature was capable of wanton acts. In other cases, the variety of animals killed has ranged from poultry to fully grown cattle; seldom are such victims consumed, although they are often found mutilated. The thought which comes to mind is that monster-related killings are done as a *distinctive indication of monster activity*. The tally of victims of the Sampson County Mystery Animal was precise, its handiwork unmistakable. Yet there was no indication that a large predatory animal was feeding on wildlife or on farm animals anywhere in the area. How could a predator survive for two months without feeding or being fed?

Only one person, a 13-year-old boy, claimed to have seen a big, dark, hairy biped. Because of the frequent recurrence of the Animal's activities, I feel inclined to discount the boy's testimony as the result of suggestion. The Mystery Animal must have been a smaller creature than the usually reported 7-foot-plus tall, hairy biped. In Bigfoot cases there is usually a multiplicity of sightings; I am convinced no one ever saw the Sampson County creature.

Further evidence not supportive of the Bigfoot theory was the size and shape of the tracks found at most of the Sampson County sites. As Project Bigfoot member Oates pointed out, the tracks were in no way consistent with the giant prints left by large hairy bipeds.

What about those tracks? Four toes in an arc over a broad, roughly triangular pad the size of a man's palm, do resemble large canine-type tracks, as many people noted.

The cries heard by Mrs. Phillips and the members of her family may provide a bit of a hint. She described the sounds as "laughing," and speculated, not too seriously, that a hyena might be the cause. Hyenas in North Carolina? For-teans should be familiar with the phenomenon of Out-of-Placeness (or OOP-ness), whereby things and beings belonging in one place find themselves inexplicably in another. OOP animals are well known, as followers of the

Surrey puma, the Kansas kangaroos, and other examples can attest.¹²

The theory that the Mystery Animal was a hyena has some interesting supportive data. Of the three species of hyenas (family *Hyaenidae*), there are the Striped Hyenas (*Hyaena striata*), the brown hyena (*H. brunnea*), and the Spotted hyena (*Crocuta crocuta*). Hyenas resemble canines, but are more closely related to civets.

The largest hyenas are those of the

Spotted variety; they are also noted for their laughing cry. Hyenas have four toes on each foot, but the claws are high up on the toes and seldom show in footprints. Spotted hyenas may be as long as 6.6 feet (including a 12-inch tail), and

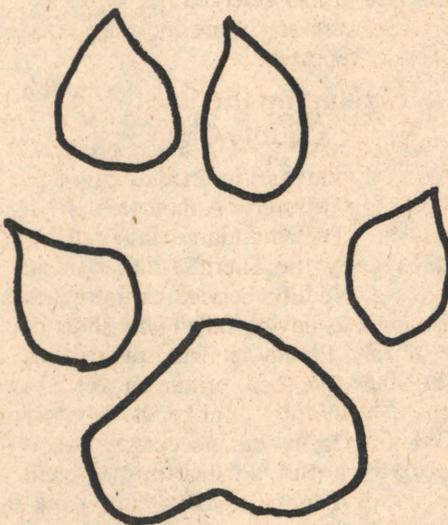
Below are the outlines of typical right-footprints of four animals, traced from photographs and reduced to approximately equal size for comparison of configuration only. Measurements are also typical.

Note the 3-lobed appearance of the coyote track; the large but irregular wolf track; and the 5-lobed pad and widely spaced toes of the bobcat. Puma tracks are very similar to the bobcat's, but larger.

(Data after Young)



COYOTE
1-1/4" x 1-3/8" x 1-7/8"

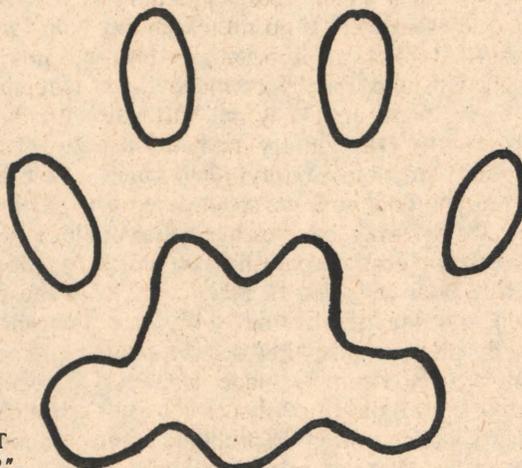


AMERICAN WOLF
3-1/2" x 5-1/2"



DOMESTIC DOG*
3-3/4" x 4-1/2"

*Breed not specified; probably German Shepherd



BOBCAT
2" x 2-1/2"

30-36 inches tall at the shoulder. Weights of the Spotted hyena male run from 150 to 175 pounds. Though commonly despised as carrion-eaters, hyenas are highly successful predators, far out-ranking lions in the number of kills committed during a season. The hyena's jaws are extremely powerful and are used to crush the large bones of their prey while feeding. Imagine what such jaws could do to the family cat—or a large dog!¹³

I would not go so far as to state categorically that the Sampson County Mystery Animal was a Spotted hyena. Clearly, if a real hyena from the African veldt suddenly found itself in the pine woods of North Carolina, a lot more destruction could be expected than was actually produced by the nocturnal marauder. No, the creature that roamed the Herring Community in 1977 was not a true hyena but probably another of those damnable Fortean monsters which appear, create a stir, then fade away like the Cheshire cat that leaves only its baffling grin behind to frustrate our curiosity.

There are several theories on how and why monsters and unknown animals crop up and then vanish as they do,¹⁴ but theorizing in the absence of facts is merely speculation without substance. Until more is uncovered about the secrets of these mystery animals, or until we can capture one, we cannot expect to comprehend their strange antics.

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A Prehistoric Race of White People May Have Lived in West Virginia's Kanawha Valley

by Nancy Clark

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AFTER reading an old book by Dr. J. P. Hale, "History and Mystery of the Kanawha Valley," I was intrigued. Its first page identified it as "A paper read before the West Virginia Historical and Antiquarian Society (of which Hale was president) on January 19th, 1897."

I remembered well an article in the March 1981 issue of *Wonderful West Virginia* magazine by Ida Jane Gallagher, which began, "As experts deciphered ancient stone tablets excavated from burial mounds and other diggings in West Virginia and nearby states, an amazing fact that may prompt rewriting of history books became evident: America had visitors or inhabitants from the Mediterranean Sea region, many centuries before Columbus landed on our shores." (That story generated a lot of interest, pro and con.) As I studied the 18-page reports of the 19th century historian, I realized the obvious connection. Here was additional evidence that a "lost race of white people"—possibly sun-worshippers from the Mediterranean Sea region, perhaps Syria or Chaldea—lived in the Kanawha Valley of West Virginia ages before the beginning of recorded history of the white race in America.

Here is a summary of Hale's report:

One Sunday afternoon in the late 1800s, a 15-year-old boy, Frank F. McConahay, with three other smaller boys climbed a high mountain behind Lewiston (present-day Chelyan), on Cabin Creek, West Virginia, 12½ miles above Charleston. In a nearly inaccessible, dry crevice in a 40-foot cliff, which they reached by crawling along a fallen tree, they discovered a strange wood object concealed beneath a huge, flat, four-inch-thick stone. The stone was a different color and texture from other rocks in the cave and had apparently been transported there for the purpose of covering the wood object. With difficulty, the boys carried the mysterious article down the face of the cliff and took it home. (Historian Hale later visited the site and noted that the crevice where the image was found could not be seen from above or below the cliff or on either side. He found nothing else of significance in the cavern.)

Examination revealed that the strange object was a carving on a solid block of wood—a statue of a footless human form, probably a woman, standing on a pedestal and holding an animal against its breasts. From the top of the head to the ankles, which rest on the pedestal, the figure stands three feet tall. The pedestal measures eight inches high and 13 inches in diameter with a three-to-four-inch hole bored through its center. Hale thought that perhaps the hole had facilitated hoisting of the 50-pound statue onto a pole. He thought the wood to be chestnut, as it contained numerous insect holes.

The historian could not tell whether the image was carved



This "Great Mound" in South Charleston, West Virginia, yielded a 6-foot, 8-inch human skeleton; a smaller skeleton buried beside it had a full head of reddish-brown hair about two feet long.

with metal tools, flint or other implements. Its partially eroded facial features could still be detected by elevations and depressions. The left ear was intact, but the right one had decayed. In general, the right side was less preserved than the left. Hale decided that the animal was probably a buffalo calf, but said it could have been a lamb. Although he had no scientific means to determine its exact age, he was certain that it was carved long before the first known white settlers entered the Kanawha Valley in the 1770s. And that puzzled him. Neither Indians nor Mound Builders were known to have carved such images.

Hale remembered that according to local tradition, Indians had repeated to settlers tales that they had heard from their ancestors about a "race of white or light-skinned people, originally from the East," which had dwelled in large numbers a long, long time ago in the Ohio Valley. Chased by warring red men, these ancient Caucasians fled westward to the falls of the Ohio River, near Louisville, Kentucky, where a bloody skirmish took place. The several hundred paleface survivors sought refuge on an island below the falls. With tomahawks raised and arrows aimed, the Indians attacked again. Wipeout! Not a single white person lived to tell the story. The fact that early settlers found a great number of human bones on that island lends credibility to this legend of the "lost tribe" of whites.

The foregoing story was told to George Rogers Clark by an Indian chief, and two army colonels heard it at Point Pleasant from Chief Cornstalk.

The historian described "an ancient and unique stone work" on Armstrong Mountain, near Mount Carbon in Fayette County, up the river (on the south bank) some 20 miles above the spot where the graven image was found in Kanawha County.

Hale wrote, "On a well marked natural bench of a high ridge which runs back from the Kanawha River, nearly at right angles, between Armstrong and Loup creeks, about 1000 to 1200 feet above river-level, was built a rough stone

wall of undressed and unjointed stones, without cement or mortar.”

Hale noted that the seven-to-eight-mile wall faced the river at the front of a steep mountain, its course formed an irregular oval with a cross-wall dividing the enclosure into two parts.

The wall originally stood six to seven feet high and was nearly as wide at its base. Because of its age, the stones had begun to deteriorate and many of them had fallen down. Within the enclosure, Hale found a small stream and remnants of two round towers, 20 feet high and 20 feet in diameter.

Ancient burial grounds hugged the base of the mountain along the river. A pile of stones covered each grave. Hale observed that “The mode of burial was peculiar and entirely different from that of the white settlers, Indians or Mound Builders. The bodies were deposited about four feet underground, horizontal from the hips down, and at an angle of about 30 degrees from the waist up, and all facing the east.

“This is a significant fact and points strongly to the idea that they may have been sun-worshippers or descended from sun-worshippers.”

Hale mentioned a thorough investigation of this prehistoric masonry by a man who visited the site in 1877, Captain William N. Page of Ansted, a civil engineer and president of the Gauley Mountain Coal Company. His findings and conclusions were published in the “History of the Kanawha Valley” by Virgil A. Lewis, and reprinted in the “History of Fayette County.”

Page stated that he had talked with Paddy Huddleston, an early white settler, Midland Trail tavern-owner and friend of Daniel Boone. Huddleston, who lived across the river from the stone walls, recalled that in the mid-1800s, when he was a boy, some Indian “medicine men” insisted that the red men had not built the walls. The Indians declared that their forebears had said long ago that the Kanawha Valley had been occupied by a “fierce race of white warriors,” and that the palefaces had eventually been killed off.

Commenting on this, Page wrote, “Though such legends are not always reliable, a careful study of the conditions, habits of the people, and bones found at the foot of the mountain, inevitably leads to more than the suspicion of a prehistoric race, differing from the North American Indian in physiognomy, character and habits.”

Page’s opinion, after examining the site, was that the walls were not used as a fortress or to confine game animals. He thought perhaps they were used to pen *domestic* animals.

His examination of skeletons revealed that they averaged 5’10” in height and that the “cranium was well proportioned with broad and prominent forehead, and facial bones more nearly resembled the white, than the red race.”

Stone, pottery and bone implements were found in the burial grounds. Page commented that “The stone instruments consisted of greenstone celts, precisely the same as those of the Continental stone age, scrapers for dressing hides, flint spear and arrow heads in great abundance in various sizes and shapes, and a lot of quoit-shaped stones, which had been marked and evidently used in some system of weights, as many are exact multiples of others. The arrow heads were nearly all of the war variety, made to be left in the wound, and not notched for a thong fastening, as was customary among Indians with their points for game.”

Another interesting and significant fact mentioned by

Page was that at a similar stone wall and burial grounds about ten miles downriver at the mouth of Paint Creek (present site of the town of Pratt), *copper* implements were found.

Page’s report concluded “That the Kanawha Valley has been densely populated by some prehistoric race, differing from the Indian in intelligence, manners and customs, there can be little doubt.”

Hale apparently felt that Page’s study of the old stone walls gave convincing evidence to substantiate his theory that the carved wood image was created by a “lost race” of white people. He speculated that the statue might relate to primitive astronomers—who were sun, moon and star worshippers and mapped the heavens into constellations representing beasts, monsters and men. One of these was named “Auriga,” and it depicted a youth carrying a goat in his arms. Continuing his hypothesis, the historians pointed out that the Bushmen and some other African tribes worshipped an image or idol with head and body but no legs; and the Polynesians carved stone images without feet.

Hale wrote, “In a recent illustrated magazine article on idols and idol worship among savage tribes in various quarters of the globe, about one-third of the images represented are without feet.”

He theorized that perhaps some wandering tribe of primitive sun-worshippers found its way to America and the Kanawha Valley long before Columbus—even, perhaps, before the Indians—bringing with them carved religious idols or artifacts. Then, while fleeing the valley in an attempt to escape from warring red men, the paleface sun-worshippers hid their sacred carved object in the crevice where Frank McConahay and his pals found it centuries later.

In winding up his paper, Hale asked his fellow historians: “May we not, then, admit at least the possibility that some adventurous rovers, maybe from the plains of ancient Syria or Chaldea, the home of the old shepherd kings and the patriarchs, where devout astronomers studied the heavens, and grouped the constellations, and the early astrologers read their life histories in the movement of the planets and the twinkling of the stars, may have found their way to this vast continent, and that some pious member with artistic taste, and versed in the traditional lore of his far-away ancestors, and among others the tradition of Auriga and his goat, carved this crude image that stands before you?”

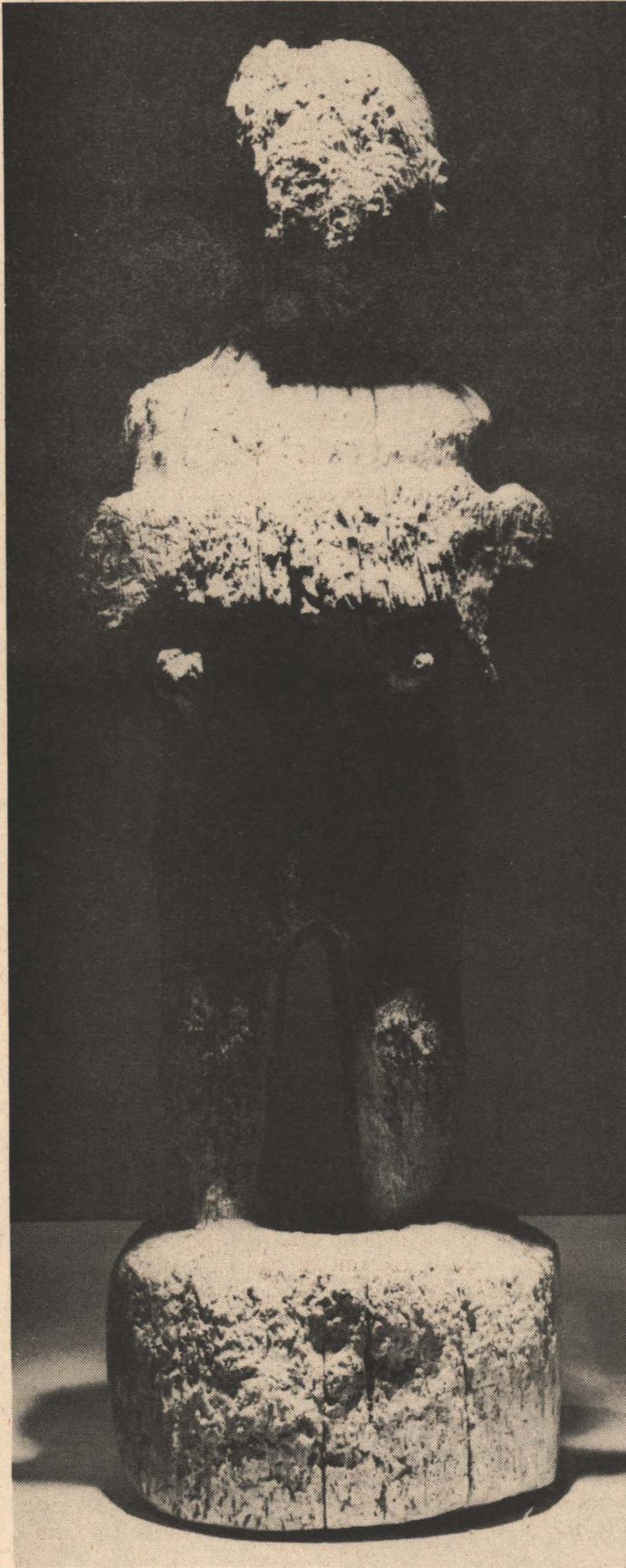
As I finished reading the book, I wondered: Where is the statue now? Has anyone done any further investigation in connection with it and the Mount Carbon stone walls? To learn the answers to these questions, I visited the state Department of Culture and History in Charleston. Here is what I found:

The carved image is intact and on display in the museum of the Science and Culture Center. It has been dubbed “the Kanawha Madonna,” because of its resemblance to the Virgin and Child.

A representative from the Smithsonian Institution examined the statue and said that it was “pre-Indian.”

In 1964 a team of scientists, sponsored by the University of New Hampshire, came to Charleston to conduct research in connection with the wooden image. The researchers and the museum curator watched as Charleston dentist G. N. Casto Jr. drilled into the statue’s base and obtained samples of the wood. These were then sent to a laboratory (Isotopes Inc., Englewood, New Jersey) for analysis. The lab reported that the wood was 300 to 450 years old (in 1964).

One of the group, noted botanist and science author Ivan Sanderson, commented that the wood was not chestnut (as Hale had thought), but a conifer (evergreen). As the dentist



The Kanawha Madonna

drilled, a "beautiful aromatic smell" reached Sanderson's nostrils, which he thought was cinnamon. Other observers' noses told them it was cedar.

When the first known white settlers arrived in the Kanawha Valley in the late 1700s, they found no Indian towns there. Historians believe that the red men migrated from the region to the flatlands of Ohio about 1650; but before that time the valley was inhabited successively by four aboriginal tribes: Adena Mound Builders, 1000 B.C.-A.D. 200; Armstrong Mound Builders, 200-1000; Buck Garden Hill People, 1000-1400; and Fort Ancient Village Farmers, 1400-1650.

The research team, after comparing this chronology with the lab report, concluded that the wood image was carved by the Fort Ancient Village Farmers. They considered it an important historical discovery, saying it was the first evidence that Indians east of the Mississippi River did wood carving. One of the group noted that the aborigines of that period had no metal knives, and the carving must have been an extremely difficult task.

In its July 1961 issue (No. 13), the *West Virginia Archeologist* (a publication of the West Virginia Archeological Society Inc., Moundsville) carried a detailed report of major studies conducted through the years on the Mount Carbon stone walls. The three co-authors of the article were Joseph W. Inghram, Sigfus Olafson and Edward V. McMichael, who personally examined the site along with assistant professor of anthropology James H. Kellar of Indiana University who spent most of the summer of 1958 excavating the area. McMichael is with the West Virginia Geological and Economic Survey, Morgantown. The report contained a bibliography (along with brief summaries) of principal studies done on the walls, including an incomplete one by an investigator working under the supervision of the Smithsonian Institution who died of a heart attack while probing the site.

The authors wrote, in part, "The results are here published of a very discouraging season's work, since little in the way of artifacts or any definite information about the site was discovered. Artifacts thus far recovered are non-definitive as to constructors, and function is considered ceremonial for lack of any other logical explanation."

A 1976 historic properties inventory form on the Mount Carbon stone walls, prepared by Phil Pitts, research assistant, West Virginia Antiquities Commission, states, "Time period: Pre-historic. Of aboriginal construction. There is very little known about who built these walls or why. The most likely periods of construction are Adena, archaic, or middle woodland."

Although the Kanawha Madonna has been examined and plausible theories conceived by historians, scientists, representatives of many foreign countries, and religious leaders, the true origin and purpose of the mysterious graven image remain today unproved and unknown.

In view of recent surprising translations of ancient stone tablets, which indicate the presence of white people from the Mediterranean Sea region here in West Virginia long before Columbus landed in America, perhaps we should again examine the findings and theories of Dr. Hale and Captain Page.



This article originally appeared in the July 1981 issue of Wonderful West Virginia magazine of which Nancy Clark is managing editor. Pursuit thanks Ms. Clark for making the text and photographs available to us. —The editors

The Resurrection of HUITZOLOPOCHLI

by George Agogino

ALMOST two decades have passed since an initial report told how human lives were sacrificed to the Aztec god Huitzolopochli during 1962-1965 in the Sierra Madre Oriental Mountains of northeast Mexico. Visits to the area in 1972 and 1973 confirmed that the sacrifices actually took place. The full details have been withheld until such time as their revelation could no longer harm those civilians who were innocently involved or the authorities who, I believe, dealt with the matter fairly and in the best way possible.

What happened in the Sixties could hardly recur in the Mexico of 1982. No other nation in our hemisphere has forged ahead as rapidly in extending the equal protection of law and delivering civilization's necessities to all its people, including those who live in rural areas. New schools are everywhere and the literacy rate has continued to climb well beyond the 80% mark reached in 1977, according to official sources. To understand what a difference a few years can make, one need only consider the demographic background against which the traditional Aztec rite of human sacrifice to the sun-god was reenacted.

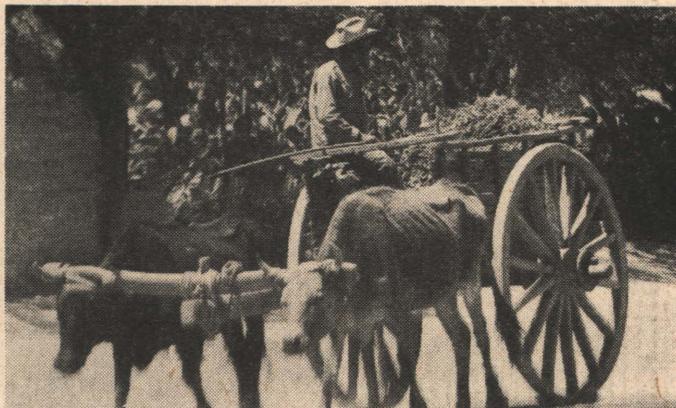
It was popular writer Bill Starr who first called public attention to the clandestine human-sacrifice cult which sprang up in a remote area of Tamaulipas in 1962 and apparently flourished undetected for almost three years. A brief version of Starr's report follows.

In 1962 mixed twins Magdalena and Eleazer Solis, sixteen years of age, left a "spiritualistic center" in Monterrey to develop their own brand of "religion" among the isolated villages of southern Tamaulipas. Operating in areas of low literacy, the ambitious twins developed a new cult that mixed modern-day spiritualism with the ancient practice of human sacrifice.

The Aztec god Huixocihuatl¹ was the chief deity to be appeased, and by tradition his special day of May 31 required the ritual of human sacrifice. The "converts" of Yerba Buena and Delgado villages were given marijuana, cocaine, peyote and other drugs to inhibit their natural revulsion and incite a willingness to reenact the 400-year-old ritual in which the chest cavity is opened with a stone knife and the still-beating heart is ripped from the pulsating body of the victim.

Magdalena and Eleazer Solis were psychologically unstable and poorly informed as to the nature and conduct of the ritual, but to the uneducated mountain villagers the two were great spiritual leaders and believed to be in direct contact with ancient Toltec and Aztec deities.

The Solis twins were motivated by a desire for wealth and power rather than a lust for blood. Magdalena Solis claimed to be the living incarnation of a famous local *bruja*, dead for more than a half-century. Brother Eleazer pronounced himself to be the spirit of St. Francis of Assisi. Lest bloody hands mar such godly images, neither twin actually engaged in the ritual killings. The murders were committed by two



Dr. Agogino took this photograph to illustrate the primitive state of transportation still prevailing in the Sierra Madre Oriental region of Mexico at the time of his investigation.

"ordained priests" of the cult—the illiterate Hernandez brothers, Santos and Cayetano.

The sacrificial victims were all volunteers, made subservient to the will of their leaders by drugs taken during the initial part of the ceremony and the stimulus of such preliminaries as dancing, singing, and clapping of hands. In mindless orgy, the cult-followers fought each other for the honor of giving their hearts to the god Huitzolopochli; for the ancient legends held that only *living* hearts could impart new life to that Aztec deity.

The less-enthusiastic cult members who preferred to retain their hearts nevertheless had hopes of reward for their witness: they went looking for gold and other treasure which, so they thought, lay hidden within the cave where many of the grisly ceremonies took place.

The radical religious cult had been in operation for about three years before the local civil authorities found them out and sought, with the military, to destroy the organization and arrest the leaders. Cayetano Hernandez was killed by police gunfire, but only after he had decapitated an officer with his machete. His brother, Santos, was also killed, as were other cult members who defended their cave fortress to the end. The Solis twins and some forty adults from the two villages were arrested and imprisoned in Victoria.²

In the cave police found a wooden "temple" with a thatch roof; inside was a natural flat-stone "altar" on which the sacrificial victims gave their lives. Strewn about were the remains of an even dozen converts, victims of tribute to an Aztec god who had not been venerated, except in this place, for more than four centuries. The military burned the temple and buried the mutilated human remains outside the cavern.

With the help of a Sigma Xi grant-in-aid, I attempted to verify the foregoing account at Yerba Buena and Delgado during the summer of 1972. The first step was an effort to ascertain the actual location of the two villages. A check of commercial and official maps failed to locate such towns within the state of Tamaulipas. The problem was resolved when it became evident that the two places were ranchos or haciendas, not towns or villages. Establishing location was further complicated by the erroneous distances given in the Starr account. Starr's report said that Yerba Buena lay 125 miles southwest of Brownsville, Texas, and was 30 miles "as the crow flies" from Monterrey, Mexico. The actual

¹ Starr's spelling, but probably correctly Huitzolopochli, "hummingbird of the left."

² "Mexican cult of human sacrifices" by Bill Starr in *Strange Fate*, 1965, Editors of *Fate* magazine, pp. 132-163.

distances turned out to be roughly 200 miles southwest of Brownsville and more than 50 miles by crow-flight to the south of Monterrey. The "town" was also reported to be fairly close to Villagran, where Police Inspector Abelardo G. Gomez first became aware of cult activity. Using Villagran as a focal point, our small crew visited the location to seek further evidence.

At the official level there was considerable reluctance to discuss the incidents. A state officer, Captain Emilo Carranza, informed me that no more than seven people had been killed by the cultists; of that number, only "a few" had been put to death by having their hearts torn from their living bodies. He refused to give directions to the "villages," or reveal the whereabouts of Inspector Gomez who had departed after making his report on the original investigation of the cult. Captain Carranza pleaded ignorance in response to most every detailed question, and it soon became obvious that little information would be obtained at the official level. Similar official politeness and the same degree of reluctance to cooperate was encountered in discussions with General Hector Portillo Jurado, the military commandant at Victoria. He did confirm that the military had been involved, but in a secondary, supporting role to the civil authorities.

No information could be obtained about the Solis twins, other than that they were given extended prison terms on March 7, 1966. Manuel Corpus Hernandez, of the "priestly" Hernandez family, was sentenced to 15 years in prison. Jesus Guerro Rubio, another cult leader, received the maximum sentence of 16 years. Each was charged with homicide, riot, damage to life and property, desecration of corpses, resistance to the police, and crimes against the republic. The penalties were moderate considering the degree of criminality. The sentences reflected the government's awareness that the crimes committed by uneducated mountain people were unmalicious and largely motivated by ignorance.

During the summer of 1973 I made a second trip for further investigation of the reported sacrificial cult, this time in the company of Professor Gustav Kocsis, a linguist and ethnologist, and Dominique Stevens, a doctoral candidate at Southern Methodist University. Discovering Rancho Yerba Buena was still the primary goal. Interviews with state officials at Villagran suggested a general area in which to look. "Try near Pacacho Peak in the vicinity of the Arroyo del Muerto (arroyo of death), about twenty miles northwest of Villagran," we were advised. Other interviews conducted at the small villages of Megay and Megellos further clarified directions.

In the course of questioning everyone who might provide useful information, we asked a waitress at the Megay Cafe if she knew of any "weird religious cults" that had operated nearby. After a moment's pause, she informed us that she knew of such a cult "still operating." We were all ears! With solemn voice and gesture she identified the cult as "Baptists"—apparently a Baptist mission in the mountains. Here was a classic demonstration of cultural relativity: in a strongly Catholic area even a conservative Baptist missionary center could be described as a "weird cult."

The road to Yerba Buena and Delgado turns west off Mexican Highway 85 at Megellos and is little more than an ox-cart trail winding its way into the Sierra Madre Orientals. The road, if it can be called that, is completely impassable in wet weather, and during the rainy season the tiny communities are truly isolated. Even four-wheel-drive trucks are

kept off this mountain during much of the year, and in dry weather the route is still unsafe and negotiable only by four-wheel-transmission vehicles.

We found the ranchos unimpressive. They consisted of fewer than a dozen shacks lying colorlessly in a rural mountain valley. There was neither school nor church, although we were informed that a school had been "promised" and was in the planning stage.

Little information was forthcoming from interviews with the inhabitants. Apparently none of the "cult period" people remained at either Yerba Buena or Delgado. Almost all of the adults in residence at the time had been arrested and the children assigned to foster homes or orphanages. Many of the adults died in prison; others who received short sentences did not return to their mountain homes after release. It may well have been a government decision that separated and dispersed the released prisoners over a wide area of Mexico.

Our investigations confirmed to a high degree the initial report by Bill Starr that ceremonial human sacrifice took place in a remote region of northeastern New Mexico about twenty years ago. Starr's estimate of roughly a dozen sacrificial victims seems to err on the high side. Our investigation through federal and state authorities produced evidence that fewer than five victims were dispatched by the removal of hearts from living bodies. The statements of civil and military authorities were supported by informants at Villagran, Megan and Megellos who agreed that between seven and thirteen murders had occurred at Yerba Buena and Delgado; the count included one or more police officers killed, and murders in which the victim was poisoned or stoned to death without ritual implications.

Our study was complicated by more than one factor. First was the reluctance of officials to provide any but the barest details; what they had uncovered and destroyed, they insisted, was a murder ring, not a religious cult employing ceremonial sacrifice, although they would not deny that ceremony was involved: Second, it was impossible to obtain remembered factual information since both Yerba Buena and Delgado had been completely depopulated during suppression of the cult's activities, then resettled by migrants from other areas. The newcomers either knew nothing of the events that preceded their arrival, or were afraid to say anything about them.

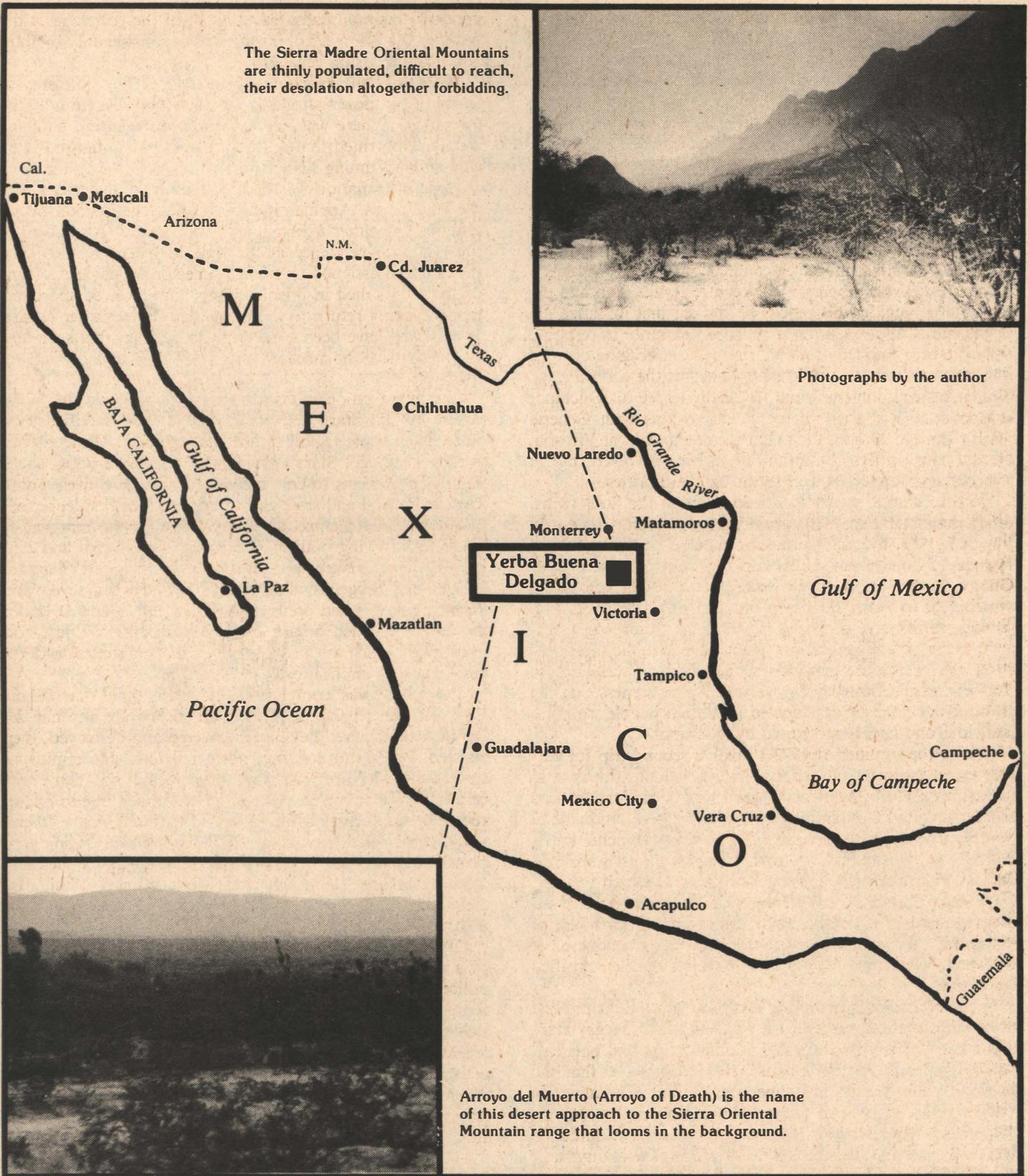
Officials were likewise reluctant to discuss the possibility of a revival or extension of the cult in other localities. The police and the military joined in refusal to regard the ceremonies as differing much from those that might precede killings by consensus anywhere at any time. Informants in neighboring villages professed ignorance of any revived cultic activity and vehemently protested that any members of their communities, as good Catholics, could ever be involved in or give support to the activities of any cult that engaged in human sacrifice.

However, Inspector Gomez of the Villagran police was quoted by Starr as saying, "The Indians are always coming up with some new kind of religion. It doesn't last long, and we don't bother them if they're peaceable." Less comforting was his statement that Magdalena and Eleazer Solis, who had spent little time in prison because of their youth and the fact that they did not themselves carry out the sacrifices, might have "established new centers of the cult to the east of Monterrey" or "on the borders of Texas on the Rio Grande."

The Sierra Madre Oriental Mountains are thinly populated, difficult to reach, their desolation altogether forbidding.



Photographs by the author



Arroyo del Muerto (Arroyo of Death) is the name of this desert approach to the Sierra Oriental Mountain range that looms in the background.



Today one can travel far into the remote mountains and valleys and find no end to the electric and communication lines that link rural Mexico with its cities. If the Solis twins did try to establish new "religious centers," they could never reintroduce the practice of human sacrifice without incurring immediate detection and prosecution. However, if human life was not involved, Mexico's laws providing freedom of

religion would afford the same protection to the Solis twins as to all other citizens of the United Mexican States.

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Recollections from the Life of a Radiesthesis

Condensed Translation of the Memoirs of
Maria Frauen, German Medical Dowser and Healer
Who Died in Her Eighties in 1968

AFTER a number of failed attempts to have the Frauen memoirs initially published in Germany, an English translation was submitted in 1979 to The American Society of Dowsters by Therese J. Mueller of St. Paul, Minnesota, the translator. ASD trustee Christopher Bird, author of *The Divining Hand and other works on dowsing*, edited

and condensed the 50 typewritten pages to suitable length for publication in *The American Dowser*, ASD's quarterly digest. The text was printed in the Dowser of August 1980 (Vol. 20, No. 3) and is reprinted by courtesy of Mr. Bird. The complete manuscript is in the permanent files of The American Society of Dowsters, Inc., at Danville, Vermont.

I. Theory

It is not without hesitation that, at the urging of friends, I take up my pen to record a few memoirs from my life in the world of radiesthesia. Undoubtedly, any good physician, practicing healer, or magnetopath would be able to offer a richer choice of interesting experiences. However, I believe that, from the methods I learned from my late teacher, Matthias Leisen, I gained valuable insights which for open-minded readers, might point the way into unknown territory.

Alas, I am not a physician or even a licensed healer because at the time I became interested in healing, Hitler's *Heilpraktiker Gesetz* (1939) forbade any apprenticeship in the healing arts. As a human being I nevertheless felt the need, even the duty, to offer my knowledge to my suffering fellow men, especially friends and relatives whenever doctors could not be reached or when their ministrations failed. Since my help was always given without remuneration, I was satisfied that I kept within the confines of the law . . .

My goal was never to earn money, for financially I was secure. Rather, it was the continuing study of hidden intertwining connections with nature. The *Elementen. Lehre* (Science of the Elements) by Matthias Leisen was for me a kind of Ariadne's thread leading me safely through an often-dark labyrinth of unclear assertions, premature conclusions, superstition and charlatany that have plagued the healing arts.

In addition to homeopathy, I learned a combination of magnetopathy and radiesthesia from my teacher. Since the two last-mentioned fields are *terra incognita* to most people, doctors included, I shall give a few explanations to make understandable what follows.

Magnetopathy, the age-old healing practice through transmission of healing power from one person to another by laying-on-of-hands, breathing, stroking and similar treatments, is doubtless only one of many good therapeutic methods. Yet, during the course of many years, I exper-

enced time and again how, under the hands of the healer, pain subsided, fever abated and even chronic illnesses began to heal. After initial nagging doubts, I came to the conclusion that magnetopathy is superior to other therapies, especially when used for internal problems. Everyone with gifted healing hands should learn to use them so that he or she can at least help family members in case of need.

The term *radiesthesia* requires definition. Originated in France, it comprises a physiological sensibility to the emanations, sometimes called "radiation", of matter. Herein the word radiation is used *not* as if a physical concept was an *a priori* assertion. Hands possessed of a radiesthetic sensibility may move involuntarily, or they may involuntarily move a rod or pendulum. Both are signs of the gift. What made my teacher, Herr Leisen, excel over other good magnetopaths was his marked ability to make radiesthetic diagnoses.

From the outset, Leisen was a dowser, a user of the divining rod. In his early years he began to search for water. His interest in healing was aroused during the First World War, when he served as a stretcher-bearer. Paracelsus,* whose writings he studied tirelessly, became his model and

* Paracelsus, Philippus Aureolus. Real name Theophrastus Bombastus von Hohenheim, 1493?-1541. Alchemist and physician, b. Einsiedeln, Switzerland; investigated mechanics of mining, minerals, and diseases of miners, in mines of Tirol; propounded own theories of treating diseases; forced to leave university because of his defiance of tradition; practiced at various places in Germany and Switzerland, finally settling at Salzburg; opposed humoral theory of disease; taught that diseases are specific entities and can be cured by specific remedies; emphasized value of observation and experience; introduced use of therapeutic mineral baths; and of opium, mercury, lead, sulphur, iron, arsenic, and copper sulfate as medicinal substances. Author of medical and occult works, including *Die Grosse Wundartznei* (1530).

—Webster's Biographical Dictionary

"I believe that the rediscovery of the dowsing faculty is not fortuitous, but has been vouchsafed to us by Providence to enable us to cope with the difficult and dangerous stage of human development which lies immediately ahead. For it gives direct access to the supersensible world, thus raising our level of consciousness and extending our awareness and knowledge. The faculty should be regarded as a special and peculiar sense halfway between our ordinary physical senses which apprehend the material world, and our to-be-developed future occult sense which in due course will apprehend the supersensible world directly."

—AUBREY T. WESTLAKE, M.D., in *The Pattern of Health; A Search for a Greater Understanding of the Life Force in Health and Disease* (1963: Devin-Adair Co., Inc., Old Greenwich, CT 06870)

guide. Like Paracelsus, he saw in the human organism the microcosm as a reflection of the macrocosm: by using small happenings as clues, he searched for the powers that cause bigger events as well as for *elements of which matter is composed*. With a great number of rods, containing the different chemical elements, he would test a patient's body. If the rod reacted, he could tell which element was "sick", i.e., disturbed or too weak in its radiation and therefore the cause of a given illness. Leisen investigated the relationship between sickness and the "disturbance" of elements for years and worked on thousands of patients. He left his insights as a precious heritage to his few pupils. In his system he included what he called the "poisons" of civilization (*kulturgifte*): nicotine, caffeine, etc., and many medicinal poisons like morphine, opium and cocaine. He used special glass rods containing each of these substances.

Whether this diagnostic system was built on physical fact or was merely a genial working hypothesis for an ability to sense illness must be decided elsewhere. Possibly the substance of a given "element" is of no consequence to the healing process. The form and frequency of its oscillation may or may not be important. Whatever the case, over many years I watched Leisen make the most surprising diagnoses which often, in a much later stage of the illness, proved correct. Compared with other methods of radiesthesia, Leisen's method presented itself to me as the simplest and most reliable. Therefore I tailored my own procedures to his system which also had the advantage of indicating choice of medication related to a disturbed element, for only homeopathic medicine can give real and durable help.

During long years of work, I reorganized and simplified Leisen's use of instruments. I learned to do without his element-containing rods, and to replace them with thought-forms that I believed caused oscillations of the respective elements. This idea has been subjected to doubt and ridicule in Germany, but Mediterranean peoples, generally ahead of us in radiesthetic practice, accept it. It can best be compared with the phenomenon of "absolute pitch" that compares a perceived sound swiftly and unconsciously with a mental sound-picture existing in memory.

Instead of a collection of instruments, I therefore used one universal rod consisting of two plastic knitting needles, their ends joined with strong adhesive tape. At times even this rod was too cumbersome to take with me, so I began to try to get along without it. I noticed that my hands would jerk, even if they did not hold the rod. So I began to depend solely on the jerking motions, using them even to select medications. I would take a sample of a medication in hand and pass it over the body of a sick patient. If my hand jerked, a healing effect was to be expected from the medication. The stronger the reaction, the more certain was its potential success. If my hand seemed to be repulsed by the body, the medication in question would be noxious.

Practice of this simple method over fifteen years allowed me to perform diverse experiments. For instance, in a street-car or at a lecture, I would watch strangers. If one of them appeared to be ill, I would try a diagnosis, without the stranger's having an inkling of what I was doing. All I needed was undisturbed, strong concentration. Thus I kept in training. Medical examinations occasionally confirmed these diagnoses of mine and added to my self-confidence . . .

I must state that radiesthesia cannot be expected to replace all the diagnostic methods of orthodox medicine and in no way claims to do so. My own experiences, however,

have convinced me that it is often more reliable than any of the others.

. . . To uncover deeper pathogenic relationships is a real task of radiesthesia, and this is why it belongs in the therapeutic arsenal of any physical or therapeutic practitioner. It is highly regrettable that, as yet, it is only practiced by laymen. But was not this also the case for Kneipp's healing methods, the Priessnitz process, and Pasteur's vaccinations? Sooner or later medical radiesthesia also will win out over the ignorance and prejudice that infuse official medicine.

II. Practice on Water

I was already in the sixth decade of my life when I met Herr Leisen and, for the first time, radiesthesia rose into my view. I had come to him as a patient, unaware that this meeting was to alter my whole future. In fact, what I saw and experienced during my sessions with him I at first violently resented, feeling that it was a quackery of the first order. Only the fact that, during years of suffering, no doctor had been able to help me in my affliction, made me put up with the six weeks of his treatment. Too sick to travel home from his house, I remained there and virtually came under his spell.

Often to my distress I found myself more sensitive than most people. As a child, people called me the "princess on the pea." When I was seventeen, an old nurse whom I had assisted with the care of a very sick patient, told me, "Study medicine; there is something in your hands that is helpful to sick people." I looked at her in surprise. What could there be in one's hands? . . .

I went to my parents and asked them to let me study medicine. They were shocked. At the time, women had just begun to study at universities but restricted themselves to "feminine" subjects and medicine was decidedly not one of them. Moreover, our family members had opted for teaching over several generations, and great sacrifices had already been made by my parents to allow me to study languages abroad. Was all this to be wasted? With a deep sigh, I surrendered to my fate and studied philology!"

However, my interest in medicine never died. As a young teacher I kept a second bed in my room where I would nurse sick girl friends or colleagues back to health.

Years passed. My hair turned gray. When Herr Leisen cured me, I became his private secretary. One fine day, he startled me, saying: "You, too, have healing powers in your hands. If you are willing, I can train you." At the time I only laughed. When Herr Leisen retorted that he knew I was able to use a dowsing rod, I decided to verify this, so I signed up for the second annual training course given by the German Society of Dowsters which finished with an official examination. The course was held in September 1938 in the Oberfalz near the Czechoslovak border. Because it looked as if war would break out in a matter of days, only four students signed up for the course. We searched for water, probed geologic faults, and traced adits from the surface, all with the help of our dowsing rods. We were also required to trace all the passages in a nearby fluor (spar works) mine. At night we learned theory.

One of the greatest obstacles for anyone using a dowsing rod or pendulum is *auto-suggestion*. Warning us about this, our teacher told us how he had caught previous students committing errors because of it. "I searched for a spot where the ground was absolutely homogenous and no reaction of the divining rod could be expected," he said. "The

next day I called my 23 beginners together and said to them, 'Yesterday I paced off a terrain where my reactions to the rod were rather strange. I have no explanation for this. Would you ladies and gentlemen please assist me?' With great eagerness, they went to work. One reported a mineral spring, another an ore vein, a third buried gold, a fourth ruins of sunken walls, a fifth a row of graves containing skeletons, three male and four female, and so on. Only one returned, scratching his head, to say: 'I don't get any reaction at all!' We were profoundly impressed by that lesson.

A few days later we stood on a high plateau on which a monastery had been built. The teacher indicated a flat stretch of ground. "Now, this is an area where your predecessors have made great fools of themselves," he warned. We walked over the stretch with our rods at the ready. In the middle of the stretch my rod dipped downward but the reaction was weak. Surprised, I consulted a fellow student. "You're right," he said. "I had by-passed that spot before but now I do get a reaction." Not at all sure of ourselves, we told our teacher: "We know there may be nothing to locate, but we seem to have found something."

The teacher dowsed the spot himself. "You're correct," he said. "There is a very small *Reizstreifen*" (strip of earth rays) present that was not here last year. I will check on it." He went into the monastery for a few moments and came back laughing. "The monks put in a telephone this year and cable was laid where you detected the radiation," he said. "You see, way down there you can see it above ground coming uphill." I beamed with pleasure.

Examination day was at hand. Each of us was assigned a stretch of terrain on a hillside where we were to find the best water vein and mark the right spot for drilling. We were supplied maps upon which to mark our findings and given the whole forenoon to solve the problem. We all surveyed our areas. Mine was part marsh, part meadow. After several hours I detected a potential water supply and marked the spot on the map. Would it turn out to be correct, I wondered. Exhausted, I sat down on the grass. Suddenly, my eye fell upon one of those small yellow stakes with which diviners mark a chosen spot. It was weathered and half-tilted among some bushes, but there it was—staring me in the face. It proved to be a sign that my work was well done. In the previous year students had worked over the same terrain, and one of them had left the marker behind.

That afternoon we were given another problem. A geologic fault, known to geologists but not to us students, cut through the territory. The river bank had covered all visible signs of it with silt and rubble. Following the fault proved tricky. At one spot it went diagonally underneath a barn. After tracking it slowly for two hours, I stood at the edge of a swamp. With a sad look at my shoes, I began to push forward when, all of a sudden, our teacher appeared at my side. "Up to this point you have traced the fault with precision," he declared after looking at my map. "You don't have to get your feet wet by going any further . . ."

Finally convinced of my ability to use a dowsing rod, I returned to my beloved studies and to Herr Leisen's practice. The same year I visited acquaintances in a small hamlet on Lake Constance where they ran the Bath Hotel, named for a once well-known and much-frequented healing spa. Its spring of therapeutic water had long ceased to exist. Only a trickle of water came from its well in the garden.

"When did the spring stop flowing?" I asked my hosts.

"Years ago, when the Lake Constance Beltline Railway

track was being laid and rocks were blasted," they replied.

"Didn't another spring appear somewhere else?" I asked.

"Yes, while cutting across their road they struck water, a small rivulet running into the lake about a quarter of an hour away from the village."

No sooner said than done. We found the rivulet and took home a sample of its water. I tested it and the sample from the well with my rod, successively concentrating on various elements it might contain. The samples were alike.

"Well, we seem to have, if not the submerged spring itself, at least a branch of it," I declared.

Familiar with my work with Herr Leisen, my hosts asked: "Could you not also name the illnesses on which this water would have a healing effect?"

"Certainly," I agreed. "Let's make a list of them."

As I wrote down the names of the illnesses, one of my hosts produced an old book. "With this book, I can check on you," he told me. "It contains a description of the spring from the year 1803 as well as the illnesses that the water could cure. They correspond to those you have listed. What a proof of Leisen's system!" he exclaimed.

"Is there also a chemical analysis given?" I inquired. There was, but alas, it differed completely from mine. Yet, a considerable number of elements which I had listed had not been discovered or known in 1803, a time when methods of qualitative analysis were imprecise. It was possible that the water contained mere traces of the listed elements. Since the data on illnesses corresponded with my list, those "mere traces" of elements could have been the cause of healing, as in homeopathy. As for the salts, which the book did mention but which I did not find, they pointed to over-specialization as a great danger, even in radiesthesia. A person who for years has tuned only to the most sensitive reactions of the human organism may no longer react to coarser radiations such as those emanating from the most concentrated substances in well water—unless he be as universal a genius as Herr Leisen who not only discovered a mineral spring on his property but also analyzed its chemical composition correctly before the well was dug. His findings were later confirmed by chemical analysis . . .

III. Treatment

Never shall I forget my first magnetic-treatment patient. I had hiked over the hills to visit an acquaintance who lived high up on a slope. A visiting relative of hers was suffering sudden and painful stomach cramps, with which she was frequently afflicted. Groaning, the poor woman covered in a chair, unable to move, and cried for a doctor, or, better, a car to take her home. Neither was easily available. The nearest phone in the village post office was more than half an hour away.

I fought a mighty battle within myself. Hundreds of times I had personally experienced or witnessed magnetic treatments. My teacher had said that there was healing power in my hands. Should I dare? Compassion finally overcame my fear. "May I try to help you?" I asked the sufferer.

The patient had never heard of healing magnetism. "But you must not touch me," she wailed. "I cannot stand it. I get these pains often, but they always disappear in eight hours."

"They won't last that long this time," I told myself. It was not a difficult treatment. After just a few minutes the woman jumped happily from her chair and tried to embrace me. I escaped, and leaving to the relative the task of explaining

what had happened, I almost flew down the hill in my joy. I was able to help—to really help!

During those years I had many occasions to revisit my Alsatian homeland. In the Vosges mountains a friend had rebuilt an ancient knight's castle and I was a frequent guest. An intelligent man with many interests, he was a gifted radiesthesist. We shared many happy hours and days searching and experimenting. His wife kept records of our experiments.

The castle stood atop a rocky crest in the midst of a forest six kilometers from the nearest village. Our only neighbor in this loneliness was a forester and his family, their home only a few minutes away from the castle. Once, during a winter visit to the castle, we were snowed in for several weeks. For days at a time we saw no one except the mailman who occasionally delivered letters on horseback. We wondered whether the snow would ever stop.

One evening my host brought news that the forester's 10-month-old son had come down with double pneumonia. A doctor had fought his way through the snow daily by car, but he gave little hope that the boy would live. If the snow continued to fall, the doctor would no longer be able to make visits. So, my host continued, he had mentioned me to the father and offered my assistance which had been gratefully accepted.

"I'd better go right away," I said. "Just give me a lantern and a walking stick. The road is open and I can easily walk alone. It's just ten minutes."

Those were some of the longest minutes of my life. The night was dark and the wind shook snow from the trees down and around me. A burst of wind snuffed out my lantern. Thick snowflakes obstructed my vision. The path disappeared into huge snowdrifts. "You'll never get through," I told myself. "Better wait for daylight."

"And if the child dies this night?" another voice asked within me. "You are unworthy of the power to heal if you fail now."

I fought on through the darkness until I reached the forester's house, completely exhausted. A pathetic scene greeted me. The child's little head was red with fever and his breath rasped as he lay listlessly in his bed. The mother was sobbing. The other children were huddled, bewildered and scared, in a corner.

"How high is the temperature?" I asked.

"104°. I just took it. The doctor said to be prepared for the loss of our child, our only boy," said the mother through her tears.

I remembered the advice given for such cases in a Handbook of Magnetopathy. First, I asked the other children to leave the room. Then I sent for a bowl of tepid water with a generous amount of vinegar in it. Near the warm oven the mother unwrapped the baby. I dipped my hands in the vinegar-water and laid them on the feverish little body. With my hands I sucked—there is no other word for it—the sickness into myself. After two or three minutes I washed my hands under running water and began over again. After twenty minutes the temperature was down to 103°.

"Enough for today," I said. "Tomorrow I will return. Meanwhile do what the doctor ordered. But now give me a good shot of whiskey, so that I can get rid of all that evil stuff I sucked into myself."

The next day I repeated the procedure three more times. The fever went down enough so that I could change over to normal treatment. On the fourth day the child's temperature

was almost normal. The snow had stopped, and the doctor would again be able to get through.

"My job is done," I told the forester's wife. "Don't tell the doctor about me. It will save trouble for both of us."

At noon the doctor arrived, a death certificate form in his pocket. He was totally surprised to find the little patient sitting up happily in his crib. "Thank God," he said. "He's on the road to recovery. Lately I have been trying my hand at homeopathy. If you are willing, I will prescribe bryonia. You will be able to get some in town."

That same evening the forester's wife came running to the castle in desperation. "Please come quickly. Our little boy has had a bad relapse."

"What did you do?" I asked.

"Nothing in particular. We gave him the prescribed medicine," she answered. I found him feverish and apathetic. He had vomited. His face had a greenish-yellow pallor. A test with the rod indicated nicotine poisoning!

"You've been smoking at your child's sickbed," I shouted at the man.

"I never smoke in the house," he countered, "just now and then out in the woods."

"Then show me the bryonia." It was in a small envelope. The pharmacist had filled it from a container. (Homeopathic medicines were at that time a rarity in Alsace.)

I tested the medicine with the rod. It was full of nicotine.

"Does the pharmacist smoke?" I asked.

"Why, certainly. All day long he has cigars in his mouth."

"Then that is the cause. He blew smoke into the medicine. With this bryonia you will send the child to his grave."

"What shall I do?" lamented the mother. "I must give the child what the doctor prescribed, but you say it will harm him."

"Now, calm down. If the devil has got into the powder we may be able to drive him out. We will put it on the stove and then pour it into new papers. Meanwhile I will treat him. Give him fresh sheets. These are full of nicotine from his sweat and exhalation."

When the doctor returned, the little boy was quite lively. The forester's wife unwisely mentioned the relapse. But she did not mention the nicotine. "These homeopathic medicines are no good," said the physician. "I will prescribe something different."

The next day I departed. When I returned several months later my first walk was to the forester's home. "Oh, had you only stayed around," the woman lamented. "How much grief and worry you would have spared us. My little boy's pleura began to fester and we took him to the clinic in Strasbourg for surgery. Thank God, he is now over the hump." Thank God, to be sure, but might not the bryonia have been better?

IV. l'Envoi

... I come to the end. I have told in all simplicity these events of my life. Knowing I have been truthful protects me with a healthy unconcern for any criticism that comes my way. Words like swindler, charlatan, auto-suggestion and hysteria have rung often in my ears. Oh-so-clever people have shown willingness to have me committed for psychiatric care or brought before the public prosecutor. But there are also wise people who have learned that there are many things in heaven and on earth about which the schoolmen have never dreamed.



Icebergs or 'Waters of the Earth'?

by Christopher Bird

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IN October 1977, 100 scientists and engineers gathered in landlocked Iowa to discuss a bizarre notion: Could an iceberg one mile long, 1,000 feet wide and 900 feet thick, weighing 100 million tons and containing 20 billion gallons of water, be transported from Antarctica to the Northern Hemisphere and parked next to the coast of a desert country to serve as a mammoth water reservoir?

The proposal to solve a shortage of water by moving icebergs halfway around the world was only the most recent in a long history of similar water-transport schemes that date back to the beginning of recorded history, among which canals dug into the earth, or aqueducts set above it, and the construction of ever more costly dams have been favorite choices.

By the time the conference began, a feasibility study for displacing a mountain of ice was already in the works. Commissioned by Prince Muhammad al Faisal, nephew of Saudi Arabia's King Khalid and sponsor of the Iowa meeting, it enjoined Cicero, a French engineering firm, to solve the problem of towing a gargantuan ice cube 7,500 miles to the Saudis' Red Sea port of Jidda. Some observers at the First International Conference on Iceberg Utilization estimated that tugs towing the berg, able to move no faster than a nautical snail's pace of half a mile per hour, would take nearly eight months to reach the Bab el Mandeb Strait at the entrance to the Red Sea.

Then there was the melting problem. Wilford Weeks of the U.S. Army's Cold Regions Research Laboratory protested that anyone who tried to drag an unprotected iceberg from the coldest to the hottest place on earth would end up with "nothing but a tow-line." Not disagreeing, Egyptian nuclear engineer Abdo Hussein nevertheless waxed optimistic that, if a strong enough version of a plastic bag could be devised to retain their melt, icebergs up to five by ten miles in size could make the voyage. UNESCO hydrologists suggested that plants for the desalinization of sea water made better economic sense.

Hydrologic Doctrine vs. Primary Water

No one at the conference was aware of the fact that over eighty years ago a Stockholm professor of mineralogy and Arctic explorer, Adolf Erik Nordenskiöld, had written a paper, "About Drilling for Water in Primary Rocks" which concluded that one could sink wells capable of producing water the year round along the northern and southern coasts of the Mediterranean, and in the whole of Asia Minor, or exactly in those areas of the world from which conference delegates most concerned about water-supply problems hailed.

Nordenskiöld, whose essay won him a nomination for the Nobel Prize in physics (he died before full consideration was given to the candidates), spent years drilling in rocky promontories and islands off the Swedish coast to bring up

water for pilotage stations forced to capture rain or import water. His impetus came from his father, Nils, chief of mining in Finland, who told him with some wonderment that while salt water never penetrated iron mines on the Finnish coast even when they were below sea level, fresh water was always present on the rocky floors of the same mines. The Swedish scientist's extensive subsequent bores convinced him that water, produced by some process deep within the earth for which he could not account, could be contacted in hard rock.

Nordenskiöld's theory completely contradicted hydrological doctrine of his, and our own, time which insists that most of the fresh water available to living things on earth first rises as vapor from lakes and oceans to form clouds. These in turn deliver the same water, condensed by cool air currents into rain, hail, or snow, back to the earth's surface. The bulk of this precipitation trickles into rivulets, brooks, streams, and rivers to run back to the sea. Part of it is absorbed by the earth's crust, where it is tapped by countless trillions of plants to be reliberated by transpiration, or seeps downward as "ground water" to collect in subterranean channels called "aquifers"—Latin for "water-carriers"—from which it can be recovered from natural springs or man-made wells. The whole circulatory process is called the "hydrologic cycle."

The Swede's new concept was to lie dormant until it was revived by a Bavarian-born mining engineer, Stephan Riess, who emigrated to the United States in 1923. Though he has never held a dowsing rod in his hands, Riess has developed a geologic theory about the origin of water which, proved by fifty years of practice, meshes well with dowers' own deductions.

Eager to discover what California mining had to offer, he traveled to Lassen County near the Oregon border and began working his way down the Sierra Nevada range. For one mining operation with over 100,000 tons of unprocessed ore lying aboveground, Riess solved the processing problem chemically with a special catalyst known, then as now, only to himself. "News of the money those fellows made raced like a grass fire through the hills," Riess recalls, "and I had me plenty of consulting work right away."

Riess's ability to recover metal from ores attracted the attention of then ex-President Herbert Hoover, who owned large mining holdings. Hoover invited the German immigrant to join a metallurgical processing firm, in which he worked together with the former President's two sons, Allan and Herbert, Jr.

One day a load of dynamite was set off in the bottom of a deep mine at high elevation to break up ore-rich rock. After the explosion Riess was amazed to see water come gushing out of nowhere in such quantities that pumps installed to remove it at a rate of 25,000 gallons a minute could not make a dent in it. Looking down into the valley



Vitruvius method for finding water: "To locate ground water, lie flat on the ground before sunrise with the chin on the ground in order to confine the search to what can be seen from that position. Water can be expected to lie under those places where vapors arise from the earth." Reproduced from 1543 edition of Vitruvius' *De Architecture*

below, Riess asked himself how water that had trickled into the earth as rain could rise through hard rock into the shafts and tunnels of a mine nearly at the top of a mountain range.

The temperature and the purity of the water's chemical analysis suggested to Riess that the water must be of a completely different origin than ordinary ground water. Since none of the textbooks he had studied referred to what appeared to be a completely anomalous phenomenon, Riess decided to look into it.

On trips back to Europe, Riess became aware that many historic castles were built on high rocky promontories such as those in the Rhineland, some of them constructed by Charlemagne's descendants. At the center of their courtyards were huge wells, often as much as eight feet in diameter with steps going into the ground two hundred meters or more, that had supplied water for centuries.

Similar wells can be found in all parts of the world. Typical is the fortress built on rocky Inner Farne islet in the mouth of Scotland's Tweed River where St. Cuthbert isolated himself from A.D. 676-687. When he visited the site in 1952, the *National Geographic's* John E. M. Nolan nearly plunged into "a huge stone cistern filled with ice-cold water" that had supplied the saint and his fellow monks. Even more awesome is a well at La Ferriere, the stone fortress built by Emperor Christophe two thousand feet above the north Haitian plain in the early 1800s and described as "deep and clear and freezing cold, and fed by an inexhaustible spring."

In the North American West an important clue to the mystery disclosed by Riess came when, working late at night in a mine shaft, he heard a peculiar hissing sound, similar to that produced by a leaky air tank, accompanied by trickling water. He tracked the unfamiliar noise down to the ball mill, an enormous cylinder that rotates and pulverizes ore to mud by the tumbling action of steel balls and water contained within it. The water trickling out of the ball mill should normally have been found above the mud in the

Details of Water Available in Various Types of Soils, According to Vitruvius

Type of soil	Depth at which water may be available	Amount	Taste	Remarks
Clay	Near the surface	Scanty	Not good	—
Loose gravel	Lower down the surface	Scanty	Unpleasant	Muddy
Black earth	—	—	Excellent	Available after winter rains
Gravel	—	Small & uncertain	Unusually sweet	—
Coarse gravel, common sand & red rock	—	More certain	Good	—
Red rock	—	Copious	Good	Difficult to obtain due to percolation
Flinty rock & foot of mountains	—	Copious	Cold & wholesome	—

credit: Asit K. Biswas, *History of Hydrology*

motionless cylinder but, to his amazement, Riess saw that it lay under a newly formed arch of mud through which hissing bubbles of gas kept rising. Holding a match over one of the bubbles, he caused a mini-explosion. What he was observing, he believed, was virgin water being liberated from ore-bearing rock by crystallization processes within the rocks themselves.

He surmised that these processes had been triggered by the presence of some catalyzing agent among the chemicals introduced into the ball mill for recovering refractory gold and silver.

Riess duplicated the water-producing process in a laboratory, then turned to perfecting methods of rock analysis. He finally came to the conclusion that, in various rock strata, deep in the earth, water was continually manufactured under proper conditions of temperature and pressure and forced up in rock fissures where it could be tapped if drilled.

Classical authors, Riess discovered, tended to support his view. As far back as 500 B.C. Anaxagoras maintained that oceans were created both from rivers flowing into them and from what he called "waters of the earth," upon which the self-same rivers depended for their own existence. Both Plato and Aristotle also supported the idea that water was formed within the earth as well as in its atmosphere.

In pre-Christian Roman times, Vitruvius, whose *Ten Books on Architecture* appeared between 27 and 17 B.C., was the first to state that water was best found, not in sands, gravels, and soil but in rocks.

In the first century of the Christian era Seneca referred to great underground rivers flowing in the planet, while his contemporary, Pliny the Elder, championing the idea that water flowed in veins, wrote that they "pervaded the whole earth within and ran in all directions bursting out even on the highest ridges."

Like the Chinese before him, Leonardo da Vinci, in his long unpublished essay, "Treatise on Water," compared the earth to a living human body. Wrote the Renaissance genius:

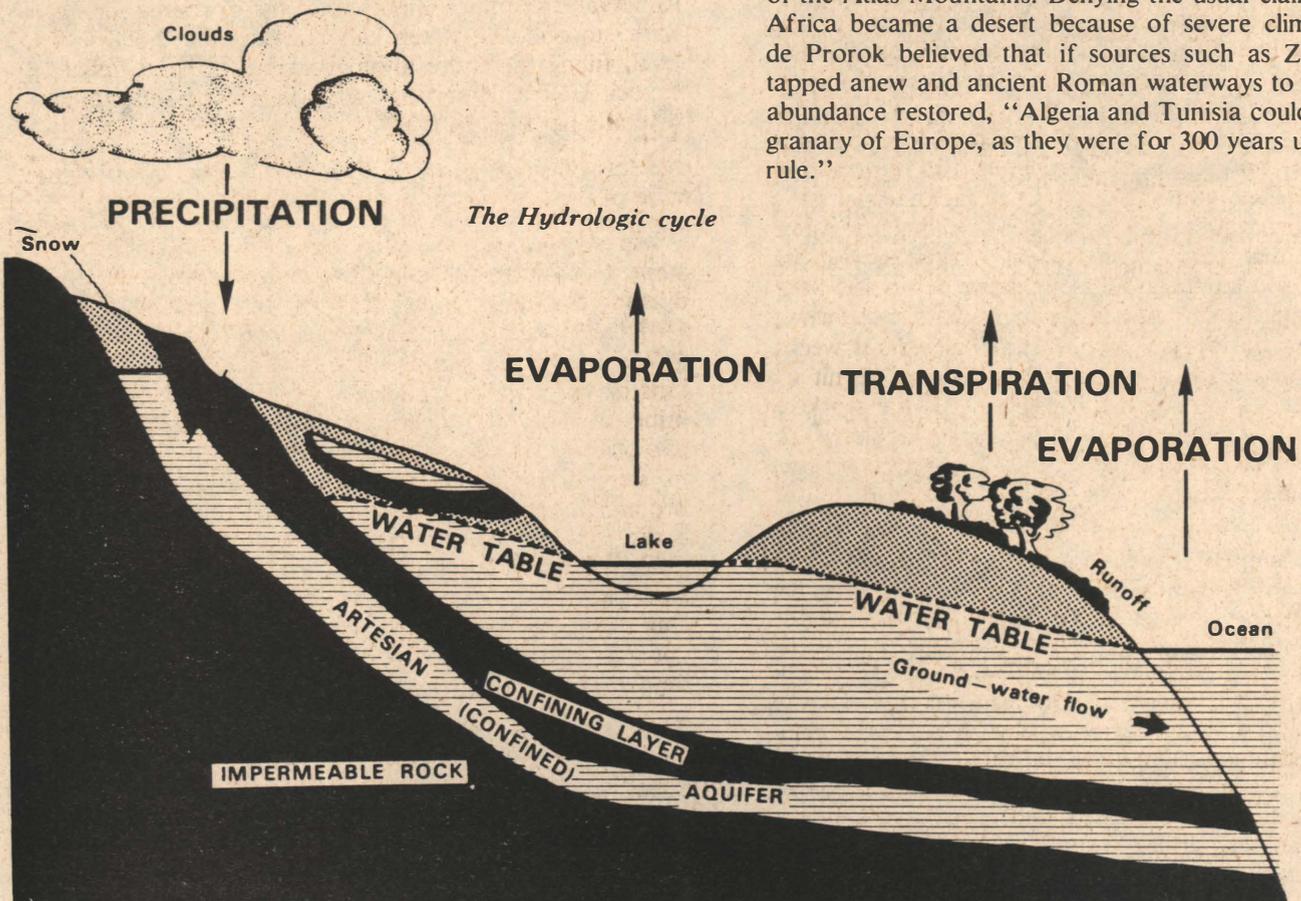
The same cause that moves the humours in every species of animate bodies against the natural law of gravity

also propels the water through the veins of the earth wherein it is enclosed and distributes it through small passages. And as the blood rises from below and pours out through the broken veins of the forehead, as the water rises from the lowest part of the vine to the branches that are cut, so from the lowest depth of the sea the water rises to the summits of mountains, where, finding the veins broken, it pours out and returns to the bottom of the sea.

This idea did not prevent Leonardo from also opting for an early version of the modern hydrologic cycle and stating that a lot of the earth's water was the result of rainfall from clouds. As Asit K. Biswas notes in his recent *History of Hydrology*:

Characteristically, Leonardo reported an occasional doubt about certain aspects of both theories, but nothing has been found so far which would indicate that he had at any time discarded the basic concepts of either of them. In fact, the chances seem good that he believed both systems operated concurrently.

No less impressive to Riess were accounts of travelers in various parts of the Mediterranean littoral and the Near East about sources of water that laid the basis for ancient civilizations. At Cyrene in northeastern Libya the famous Fountain of Apollo still gushes from a tunnel hewn into rock just as it has done since long before the birth of Christ. In his book, *Digging for Lost African Gods*, archaeologist and explorer Byron Kuhn de Prorok described the enormous spring at Zaghuan, forty-eight miles from the site of the ancient city of Carthage near modern-day Tunis, which flows through a still-standing Roman temple on the slopes of the Atlas Mountains. Denying the usual claim that North Africa became a desert because of severe climatic change, de Prorok believed that if sources such as Zaghuan were tapped anew and ancient Roman waterways to channel their abundance restored, "Algeria and Tunisia could become the granary of Europe, as they were for 300 years under Roman rule."



In the Fertile Crescent Nelson Glueck describes the easternmost source of the River Jordan as a full-formed stream bursting forth from the base of an earthquake-battered cave in a great iron-reddened limestone cliff, while its westernmost sources originate in one spring at the foot of a buttress of Mount Hermon and in another which "pours from the cliffs in waterfalls."

In the *National Geographic* magazine for December 1951, an article entitled "The Ghosts of Jericho" recounts that even in the recent past, thousands of Arab refugees were getting their water from the *same spring* that supplied the site in *neolithic times*. Called Ain-es-Sultan or "The Sultan's Spring" in Arabic, it is identical to that "healed" by Elisha as reported in II Kings 2, 19-25.

The Ain Figh Spring, a remarkable source of water, today supplies the entire population (1.3 million people) of Damascus, Syria, and is also the principal source of the Barada River. A report on it by the International Bank for Reconstruction and Development reads:

The principal emergence of the spring, which has been enclosed in a structure since Roman times, resembles an underground river several meters across, which flows up and out of the limestone formation of the mountain. The total flow has averaged 8.63 cubic meters per second (about 132,000 gpm). The water quality is very good, its temperature and pH are relatively constant (near 14 degrees Centigrade and 7.9 respectively), its taste and color are excellent, and bacteriological contamination at the source is practically nonexistent.

Straight Answers

Riess's first opportunity to prove that water could be located in crystalline rock came in 1934, at Nelson, in the southeast tip of Nevada, where a mine could be made profitable only if a source of water could be found to mill millions of dollars of gold- and silver-bearing ore heaped up near its shafts. The idea of drilling into a mountainside for water appeared so outlandish to his associates that Riess, fearing to make them the laughing stock of the mining industry by bringing in a conspicuous drill rig, ordered a 4x8 shaft drilled with air-compressed jackhammers.

"No geologist would dare recommend drilling for water in places like that today," says Riess. "That is why the Hoovers were so skeptical. But as we drove down and went through the upper, softer alluvium into the hard rock below, I began to get encouraged. We worked for several weeks and then, when we got down to 182 feet, boy, we hit it! The water rose so fast in that big shaft that the workers barely had time to get out of there with their jackhammer before they drowned. It came in under a lot of pressure and surged to within six feet from the surface."

Riess installed a pump in the shaft and, in his words, "pumped the smithereens out of her, on and off for three weeks, half a day, or a whole day at a time. The water ran down the canyon in a brook. There was no drawdown. She maintained her level at six feet from the surface." The new water renewed the mine's profitability and 4 million dollars' worth of bullion was shipped to the San Francisco Mint before World War II exigencies closed down operations. When mining was resumed in 1977, the local press reported that Nelson Joint Ventures was pumping water from a good well drilled on leased land. The good well was none other than that drilled forty-five years previously by Stephan Riess.

Morad Eghbal, an American-trained Iranian graduate student in geology, asked Riess to elaborate on his methodology. Eghbal was keenly aware that the mining engineer's ideas did not fit into any of a series of models which geology, perhaps the most speculative of the natural sciences, has developed over decades to explain what may be happening in the unseen world below ground.

"When you consider," said Riess, "that so many of the productive mines in the world have been washed out before they could be worked out and a lot of working mines are pumping out thousands of gallons of water, you've got to ask yourself where the water comes from. I'm speaking of really big operations like the Comstock and the Tombstone."

Historians bear Riess out. Of the famous Comstock silver lode at Virginia City, Nevada, Grant M. Smith writes:

The Combination shaft intersected the Comstock Lode at the depth of 3,000 feet and entered a body of low-grade quartz on the 3,200-foot level, which proved of no value. The shaft was then sunk to the 3,250-foot point. The double line of Cornish pumps was unable to handle the water when the shaft began to make connections with adjoining mines, and Superintendent Regan installed a hydraulic pump to assist, using water furnished by the Water Company as a plunger. Later, two additional hydraulic pumps were installed. The pumps were then lifting 5,200,000 gallons every twenty-four hours to the Suro Tunnel level, or 3,600 gallons a minute. This quantity lifted 3,200 feet would require about 3,000 horsepower theoretically, or with pipe friction and modern pumps and motors about 4,000 horsepower continuous load.

On October 16, 1886, the Combination pumps ceased to operate. Within 36 hours after the hydraulic pumps were stopped the water had risen to the 2,400-foot level, filling the entire lower workings of the Chollar, Potosi, Hale & Nureruss, and Savage mines, including several miles of crosscuts.

No less impressive is Otis E. Young's description of the demise of the huge silver mine at Tombstone, Arizona:

While dewatering was going on, the related Tombstone Consolidated Mining Company attended to reopening the mines as fast as they were dried out. By 1905 the project had proved a qualified success. At the 800-foot level the pumps were raising 2.3 million gallons of water daily, while the output of the reopened mines went to the refineries at El Paso in the form of two or three carloads of bulk concentrates a day. Profits were helped along by scavenging both low-grade ore and the waste dumps of the earlier period. With a rise in world silver prices that occurred at the same time, the operation showed a profit for four years. In 1909 it was given out that boiler breakdown had shut down the drainage system and that before repairs could be effected the entire complex had been drowned beyond redemption.

Riess told Eghbal that he mainly looked for "restricted faults" or breaks in the earth's crust which rarely reach to the earth's surface. Where these vertical pipes or fissures or fumaroles did reach the surface, great natural springs or primary water occurred. "You take the creek up in Kings Canyon National Park," he elaborated, "why, it flows at

several thousand gallons a minute and it is above all drainage in any direction. Moose Lake, in the same area, also has no visible watershed and that, too, flows at several thousand gallons a minute. Even in dry summer months on Mount Whitney at about 13,000 feet there is a sheer granite wall with a protrusion on its face that cups a small lake. If that lake water is rain or snow, then all we have to do is hang tanks on the Empire State Building or the Eiffel Tower and expect a constant flow of water.

“At no time is water static,” Riess went on. “It is constantly changing form. It is either a liquid or gas, or it is bound up in crystalline form in rocks and minerals. The cycle of gas to liquid to crystal is repeated over and over. Oxygen and hydrogen combine under the electrochemical forces of the earth to form liquid water. Not only is water being constantly formed within the earth, but also rocks, minerals, and oil. What I seek is water in its liquid state.”

During a ten-day field trip to look at various water wells developed by Riess over the last thirty years, all of which are producing as copiously as when they were first bored, Eghbal learned that the mining engineer uses a twofold approach in locating sources of water. First comes a detailed study of surface structure, the main targets of which are the identification of contacts, or places where two kinds of rock strata adjoin to create natural fissures. Such a contact zone can be found between overlying layers of sedimentary rock laid down over millenia by erosion and deposition, and underlying basalt, a hard, dense, igneous rock formed, like granite and other varieties, by crystallization of molten material that comes upward from deep within the earth.

“Just like igneous rock,” Riess further explained, “the water I get has to be coming from great depth because it is free of leach minerals found in water flowing through sediments. It comes up through the basalt fissures, some from 5 to 10 and up to 20 to 30 feet wide, that go down into the earth to provide vertical aqueducts.”

To demonstrate to Eghbal the kind of thing he looks for in surface structure, Riess indicated a dyke, a miles-long thin protrusion of igneous rock slicing through adjacent sedimentary structures. To visualize this, one need only posit an extended strip of metal sheeting forced vertically into beach sand to create a barrier within it.

“This dyke,” Riess told Eghbal, “is made up of gabbro. It has risen up through sandstone and cuts very plainly through this geology. You can see where it actually surfaces in some places from which its direction, or ‘strike’ as geologists have it, can be traced across country. On this gabbro contact, a seam of water is flowing down below in a big fissure maybe five or six feet wide. The dykes, penetrating as they do into the lithosphere, the rocky crust of the earth, go down to where the rock becomes fluid. The contacts on gabbro can run thousands of feet. The dykes are mostly vertical or with a very slight dip, never much less than 70 degrees.”

“Do you always drill next to a dyke?” asked Eghbal.

“No,” replied Riess, “if it’s a displacement, I don’t. You have to figure that out. You can get misled a hundred times over if you don’t know your business.”

“So in essence you want to know if there are any displacement faults that might have moved the area you’re going to be drilling on?” Eghbal asked, hitting on the essence of the problem.

“Yes, it might have moved as much as 500 yards, and then you’ll be off it,” Riess both agreed and warned.

Riess further explained to the Iranian that if the water came up to, say, 150 feet from the surface and struck a lateral channel, it could travel horizontally for one hundred miles or more. “I couldn’t give you an accurate prediction on that without first-class instrumentation and a time-consuming study of the region’s geology and possibly by sinking some core holes miles apart which would give me a picture of the strata below ground,” he made clear. “This would give me an idea of whether the bedrock lay high or low. The dip and strike of the bedding plane would be revealed very clearly in the cores.”

Eghbal broke in: “What would happen if the water ran twenty miles in a lateral displacement and then hit another vertical fissure. Would it come up?”

“Yes,” replied Riess, “if it’s blocked. If it hits any kind of restriction it has to rise just as if it were coming up behind a dam and spilling over it. You could find water at one spot only 500 feet down and, maybe three miles away, it might be down at 5,000 feet. It depends where the basement, the bedrock, is.”

Side by side with his evaluation of structure, Riess focuses a lot of attention on the composition of rocks. Says Eghbal: “What he’s looking for is which association of minerals, including water, they might contain. Think of a cocktail or a dinner party. If you know some people will be present, then you might deduce that others will also be in attendance. This is where his petrography and crystallography come in. He doesn’t care about the size of the crystals in the rocks as much as their relative quantity, which gives him an idea of how the rocks have altered, or metamorphosed, over long periods of time and allows him to trace the deposition to the time of its origin.

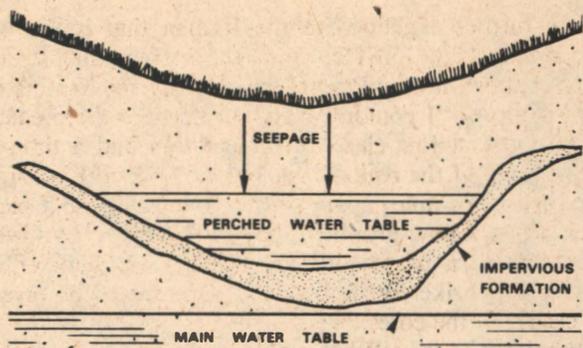
“I also asked him if the age of a given rocky formation made any difference and he replied that, if the structure of the formation permitted an upflow of water, he didn’t give a damn if it were Precambrian, or only half a million years old. It’s mainly a vertical, rather than a lateral, opening between two distinctly differentiated formations that he’s looking for. It’s always on a contact between two walls with a space, he says. The space can be filled with impervious material, sort of like a long cork which you have to drill through to get down underneath it. He’s drilled as much as 1,000 feet but when he finally broke through, he got a good well.”

Eghbal inquired of Riess whether he could predict water veins through seismology, the study of subterranean structures by use of sound waves. “Very likely,” was the reply, “because then I’d have a lot of stratigraphic information. But still I have to depend on past experience which has taken years to collect. I have to know what to look for. You can’t learn these techniques in a few weeks or even a few months.”

After listening to Riess’s exposition and looking at his well sites, Eghbal began to wonder why in his geology classes he had never been taught some of the ideas the mining engineer was expounding. “Riess’s work brought into focus some of the very problems that I tried to address to my professors,” explained Eghbal, “but they always shied away from them and I could never get any straight answers.”

‘L’Eau des Roches’

Is primary water produced in rock and available for tapping there? Nordenskiöld and Riess are not the only ones to provide an affirmative answer to this question. Professor C. Louis Kervran, a biologist and engineer who before his



Ground Water Movement and Perch Water

retirement was a French government expert on nuclear radiation hazards, asserts that most of the wells in his native Brittany are dug into solid granite.

"Certain 'purists' declare this impossible," wrote Kervran in a 1977 essay on the origin of water found in crystalline rock. "They hold that water can only come from a permeable layer impregnated with it. A sponge, as it were, is needed, they say. This is entirely false and everybody knows it except overspecialized theorists who, even when confronted with facts, will not admit to anything that falls outside the subject matter they absorbed in school."

During his professional career, Kervran knew of so many cases in which tunneling operations in mountain rock were suddenly flooded with water that he did not even bother to collect data on them. "The incidents were," he noted, "so banally commonplace as to be known to thousands." The floods, which in many cases literally "drowned the construction sites," says Kervran, were generally attributed by geologists to what they called "contained" or "perched" water.

Brittany's granite—termed by Kervran "primary, impermeable terrain"—has supplied water for all farm animals and humans as long as anyone can remember. Like Livingston's wells in the granite under the high Sierras, the wells in Brittany rarely run dry, even during extended droughts such as the one which struck the peninsula in 1976. So widespread is the knowledge of wells in granite among the Breton peasantry that the expression *L'eau des roches* or "rock water" has long existed in their vernacular.

Labeling it "constituent water," or that forming part of a whole, Kervran notes that anyone can find out how much of it any rock contains by weighing the rock before and after heating. In his view constituent water was formed at the same time as the rock itself, a lot of it hundreds of millions of years ago, by penetrating the metamorphosing rock as steam and becoming imprisoned when the rock was a precrystalline viscous paste heated to temperatures of an order of 800 degrees Centigrade at enormous pressures of 2-3 kilobars. Cooling, the rock shrank and cracked, opening up fractures leading in all directions.

On this account Kervran holds that it is difficult to find a rock even ten meters thick without such a crack or fissure, many of which intercommunicate, meeting at various angles and forming huge crevices or voids. The voids fill with water for which the myriad fissures are pathways or what Kervran terms "drainage pipes." He has even seen water protruding from such channels where they are laid bare on the faces of cliffs.

During his years as a construction foreman building Interstate Highway 88 through the Sierra Nevada, Livingston, too, noticed similar openings oozing water, especially after

heavy equipment had made cuts through rocks. Echoing Livingston's idea that the water in rock is "living water," Kervran avers that this water is generally in motion and that where the flow is more than minimal, it can be easily detected by dowzers. This explains why dowzers are, in his words, "*habitually* used in rocky regions in Brittany to pinpoint the *exact location* where one must dig to contact flowing water. The locations are detected by the dowzers with *great precision*."

During the 1976 drought in Brittany, the French Geological and Mining Bureau lent its drilling equipment, used to prospect for minerals in the American Mountains, to a crash program to find new water wells. In 1977, the *Ouest France* newspaper with the highest circulation in the French Republic, reporting on the bureau's work, emphasized in italic print that its wells in Brittany were "*drilled into crystalline and metamorphic terrain which has too long been erroneously reputed not to be water-bearing.*"

"Why can't geologists submit to the evidence?" asks Kervran. "It is easily possible to find water in so-called impermeable rock. If books on geology do not mention this, it is because all the widely known observations of this phenomenon have never yet been assembled. No synthesis has ever been made of the data, and what a shame."

To gather data on water from rock in Brittany, Kervran traveled in 1977 to the village of Lizio near Ploermel where a local industry, Katell Roc, was bottling 300 million liters of particularly pure, almost mineral-free, water that is distributed all over Brittany and has recently become popular with "health-food" stores burgeoning in the region of Paris.

Greeting Kervran at the Katell Roc site in a sparsely inhabited countryside were three installations that might have been taken for secret underground laboratories. Surrounded by high barbed-wire fencing, each appeared to be a dome of cement some thirty-five meters in diameter, rising above the ground to a height of about four meters. Out of the domes protruded huge ventilation shafts suggesting underground activity. When the door of one of these installations was unlocked, the Katell Roc president led Kervran down underground beneath the dome. To his surprise, Kervran found himself standing on a kind of catwalk and looking into an enormous round well thirty meters across and nine meters deep. That the well itself had been dug into solid granite was clearly revealed by the side walls all the way around its circumference.

The Katell Roc president told Kervran that the well was fed by a threadlike fissure only 5-6 millimeters wide, which had been detected by a dowser. The huge cisternlike tank had been dug into the rock to serve as a reservoir which is pumped off during the day and recovers each night, even overflowing to fill an additional tank of 700 cubic meter capacity.

"Where does water of such purity come from?" asked Kervran.

"I don't know," replied the Katell Roc executive. "Geologists claim it comes from rain falling on Brittany's central mountain range more than fifty miles from here."

"Then water in the wells all around Lizio should be of the same composition as yours," reasoned Kervran.

"Yes, it should," the other man agreed, "but it isn't. It's of a totally different composition. The geologists have always told me that our water is rain water. Now I wonder if they are right."



AN enigmatic symbol to the modern mind, the ancient world's Tree of Life is even more mysterious when one considers the stylized symbols of the ancient New World. The similarity and at times identical meanings of the basic elements are unmistakable.

Many scholars choose to believe that similarities between the Old and New Worlds are coincidental; however, when we study more closely the details of the Tree of Life, it is difficult to support such conclusions. Perhaps, upon examination of an old concept with a new perspective, we may better understand that a diffusion of cultures once took place between the hemispheres.

There are several basic elements to any Tree of Life scenario. The primary figure would be the Tree of Life. It is always placed at the center. The bird element is always at the top, or above, the Tree. This consists of a bird or a portion of one, such as a solar disk with wings (see Fig. 1). Guarding the Tree of Life are at least two personages or priests, usually standing on either side and facing the Tree.

Examination of the Assyrian Tree of Life and pre-Columbian Tree of Life illustrations, clearly shows coinciding elements of design (compare Fig. 1 with Fig. 2). The evolution of conventionalized patterns among various Indian tribes of Mesoamerica has not changed the original symbolic meaning. The Aztec's Tree of Life is pure and simple, whereas the Mayan, at Palenque in Chiapas in particular (Fig. 3), are extremely complex; but the elements are the same: a tree, a bird, and attendants.

The Aztec people were in awe of the symbol of the cross that was carved on banners brought by the Spanish conquistadors, not because it stood for the Christian cross, but because it represented their sacred emblem for the Tree of Life, their white and bearded god of life, Quetzalcoatl, and the four quarters of the earth. As we shall see, these three aspects are interwoven into the core of the Tree's symbolism—the core being intricately woven around the theme of life itself.

These early Americans named their Tree Tonacaquahuitl, which means "God of rains and of health and tree of sustenance or of life." This conveys the same idea of fertility as the Egyptian cross, which was the symbol for life and generation.

The Tree of Life seems to have a world-wide representation of cosmic harmony between heaven, earth and

THE TREE OF LIFE

Offers

Evidence of Pre-Columbian Contact

by Diane E. Wirth

hell—in actuality, uniting the upper and lower worlds. The bird element represents the heavens, while the Tree's branches reach upwards toward celestial spheres. The roots of the Tree press downward toward the lower regions of mother earth whose womb contains the waters of the underworld.

Pre-Columbian tribes apparently tend to express themselves in a richly detailed manner—symbols within symbols. Rarely do they have just one meaning per glyph. The Tree of Life was supreme in its interpretation, and its appeal ran the gamut from high priestly esthetic interpretations to the people in their daily tasks. At the lower

end of the scale we see it representing tribal life.

Because of the far-reaching aspect of the Tree, the Aztecs looked at its branches as spreading to the four corners of the earth. In this respect it was often referred to as a directional tree, and tribes were associated with various trees depending on their geographical location.

Breaking the symbolism down even further, the various parts of the Tree were identified with sundry members of the community. The leader of the tribe was spoken of as the trunk, the minor chiefs as branches and twigs, their vassals as leaves, the maidens as flowers, and the women as fruit.

In another symbolic sense these tribes saw themselves as descendants of the Tree of Life, thus imbuing it with a genealogical quality. They believed not only that their ancestors were begotten of the Tree of Life traditions; they felt that a highly personal relationship existed between the Tree and their first progenitors.

Eduard Selser, an authority on Mexican codices, suggested that the early inhabitants of this continent were quite aware of the Garden of Eden story. In his interpretation of the *Codex Telleriano Remensis* he saw a representation of the Mexican Eve (Ixnextli) as the first sinner. She is seen in the codex as "weeping for her lost happiness, having been driven from paradise because she had broken a flower" from the sacred Tree.¹

An interesting Tree of Life is drawn in the *Tonalamatl*, codex of an Aztec calendar. The design has the usual bird motif at the top of the Tree, budding flowers, and is broken asunder at the middle (Fig. 4). The symbolism has



Fig. 1 Assyrian Tree of Life, after Layard, *Monuments of Nineveh*, London, (1853).

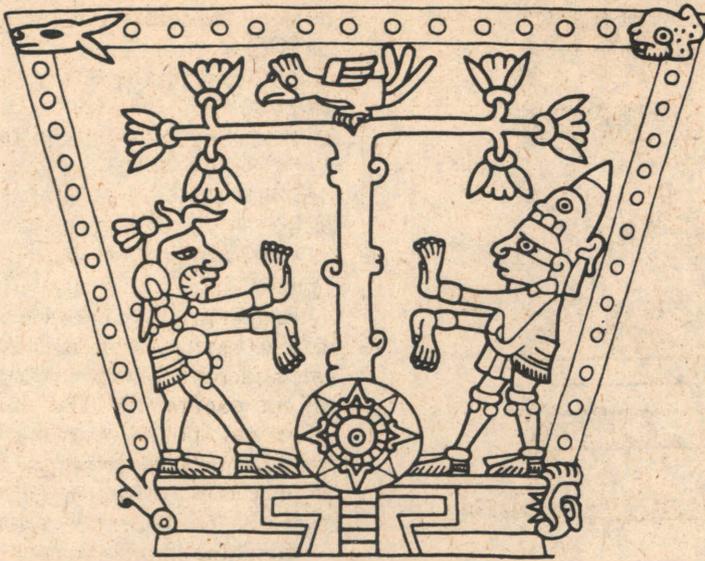


Fig. 2 Mixtec Tree of Life, after the *Fejervary-Mayer Codex*, City Museum, Liverpool.

been interpreted to represent the land of their forefathers, Tamoanchan, the cradle of all original tribes. It is described as a paradise not unlike the Garden of Eden, from which the first people were expelled by the gods. The blood flowing from the break in the Tree² emphasizes that it is indeed the "Paradise Lost, the forsaken cradleland."³ The similarity to the story recorded in Genesis is truly amazing, yet these codices were made long before the Spanish arrived with their Bible.

The information at hand appears to make sense when we put it alongside the theory of diffusion. If the Tree of

Life theme were brought to the western hemisphere by cultures from the Old World, it follows that all the lore associated with the design of the Tree would also have been established on this continent. When we uncover the ethnic roots of the Tree of Life tradition we find an amazing symmetry, for in most parts of the ancient world the Tree flourished in lore and legend.

In Scandinavian mythology Odin is closely associated with the Tree of Life, for this is where he gained his wisdom. Northern ancient peoples also regarded the Tree as the original source of life. The Scandinavian Tree was topped by

a bird, a golden cock. Serpents were also involved in the imagery, and it was said that no power on earth could destroy the ever-living Tree.⁴

In Egypt the pharaohs were fed on the fruit of the Tree and drank of the water of life from the well which it replenished.

Donald Mackenzie gives a synopsis of the Tree's life-sheltering attributes as accorded by Gaelic peoples:

The well-known Gaelic legend of Fraoch resembles closely the Buddhist legend of Paravataksha. A holly tree grows above a pool in which there is a dragon-like monster; this monster attacks anyone who plucks berries from the tree. In Gaelic lore the holly berries renew youth, promote longevity, and are the source of supernatural knowledge. The berries contain the 'life substance' of the tree-guardian which reposes in the well.⁵

In India the Tree represents the universe which gives the gods special gifts such as eternal life, supreme happiness and productive power. In this way the partakers of the fruit remain fresh and healthy and death has no power over them.

Among the Chinese a tradition is preserved concerning a mysterious garden, where grew a tree, bearing apples of immortality, guarded by a winged serpent, called a dragon. And so on the story goes.

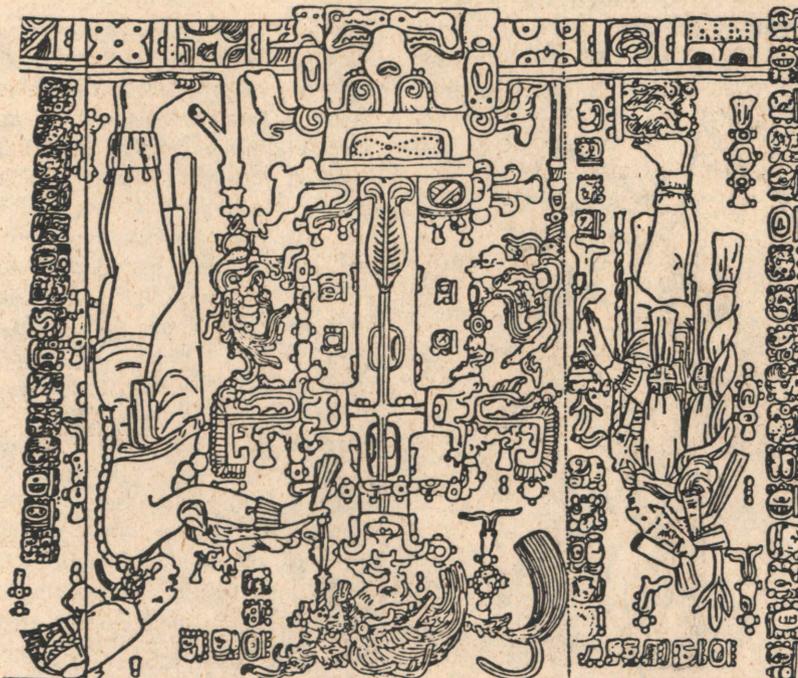


Fig. 3 The Tablet of the Cross or Tree of Life, Palenque, Plate XLI, Bureau of American Ethnology, Bulletin 28.



Fig. 4 Severed Tree of Life, after the Aztec *Tonalamatl*.

The ancient Persians probably had more representations of the Tree of Life than anybody else on earth. Their kings had such trees constructed artificially out of silver to stand beside their thrones. Persian rugs almost always contained a modified Tree-of-Life

motif, sometimes stylized beyond recognition and representing either a flow from a vase (the water of life) or a tree. The branches and fruit of the tree bordering these rugs represent the Garden of Eden.

More in line with Western thought, we find mention of the Tree of Life in Biblical and Apocryphal writings. In Esdras II:8-30 we read: “. . . They shall have the tree of life for an ointment of sweet savour; . . .” Similarly, the Bible states (in Revelation 2:7) how the precious gift of the Tree of Life may be obtained: “He that hath an ear, let him hear what the Spirit saith unto the churches; to him that overcometh will I give to eat of the Tree of Life, which is in the midst of the paradise of God.”

Once again in the New World we find the tradition of the Tree of Life not only in Mesoamerica but also in North and South America. Three-branched trees are frequently encountered in old Peruvian work, especially textiles. A piece of tapestry from Pachacamac represents a tree flanked by guardians, with fruit falling into the hands of kneeling chiefs below.⁶

In North America the Osage Indians had a remarkable Tree of Life “chart.” At the top we see a tree near a river. The Tree is a cedar, called the Tree of Life. It has six roots, three on each side. Stars and constellations are under the scene. The bird element now comes into view. It is seen hovering over the four upper worlds. The lowest world rests on a red oak tree. The story of the illustration is the migration of souls from the heavens to the earth—man now begins his life.⁷

Starting with the top of the Tree, let us analyze the elements of Tree of Life illustrations. Most of the Trees are topped by a bird element, or have some sort of bird representation close by. Since the bird-creature is noted for its ability to fly high above humankind and symbolically close to the heavens, it is associated with deity. Whether portrayed as a winged disk (Assyria) or as a quetzal bird (Mesoamerica), the meaning is identical: it is a sign of a divine presence.

Nowadays one of the surest ways to stir revulsion is to talk or write about snakes. The ancients had a different concept; they looked upon the lowly serpent as a source and therefore a symbol of great wisdom. The famous Tree of Life bas-relief at Palenque, Mexico, has a combination serpent-bird

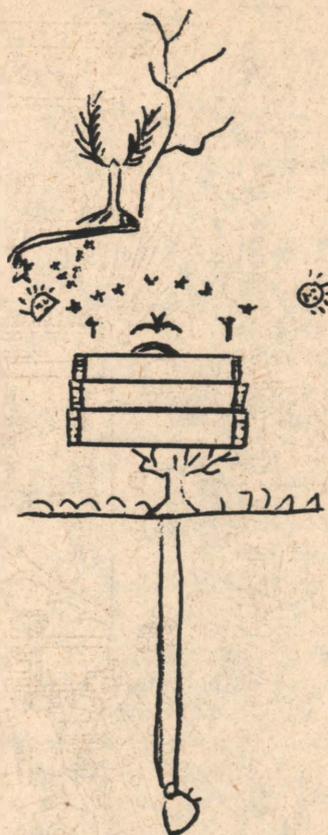


Fig. 5 Symbolic Tree of Life Chart of the Osage, after illustration from *Sixth Annual Report of the Bureau of Ethnology*, Smithsonian (1888), p. 378.

on top of the Tree, and a conventionalized serpent's head terminates each branch. As they weave their sinuous way through many Old World legends, serpents are often seen entwined about or lying near the Tree.

And what of the caduceus (Fig. 6) now so widely used to advertise our



Fig. 6 Caduceus

modern “health services?” This is one of history's most ancient symbols, and in essence it is a Tree of Life scenario. There are the wings or “bird element” at the top; the staff representing the Tree itself; and the serpents entwined denote great wisdom, i.e., knowledge of life.

Another notable characteristic of the Tree of Life is the color of its fruit. Although the fruit has been depicted in a variety of forms, ancient writings are curiously unanimous in describing the color as *white*.

The Persian *Zend Avesta* speaks of the Tree of Life as bearing the white Haoma whose sap conferred immortality. In his book, *Mexico South*, Miguel Covarrubias likewise describes a pre-Columbian Tree of Life in a Garden of Eden setting:

. . . a mythical utopia, a sort of earthly paradise symbolized by the bleeding Tree of Life, a tree that excreted a *white* juice, . . .⁸

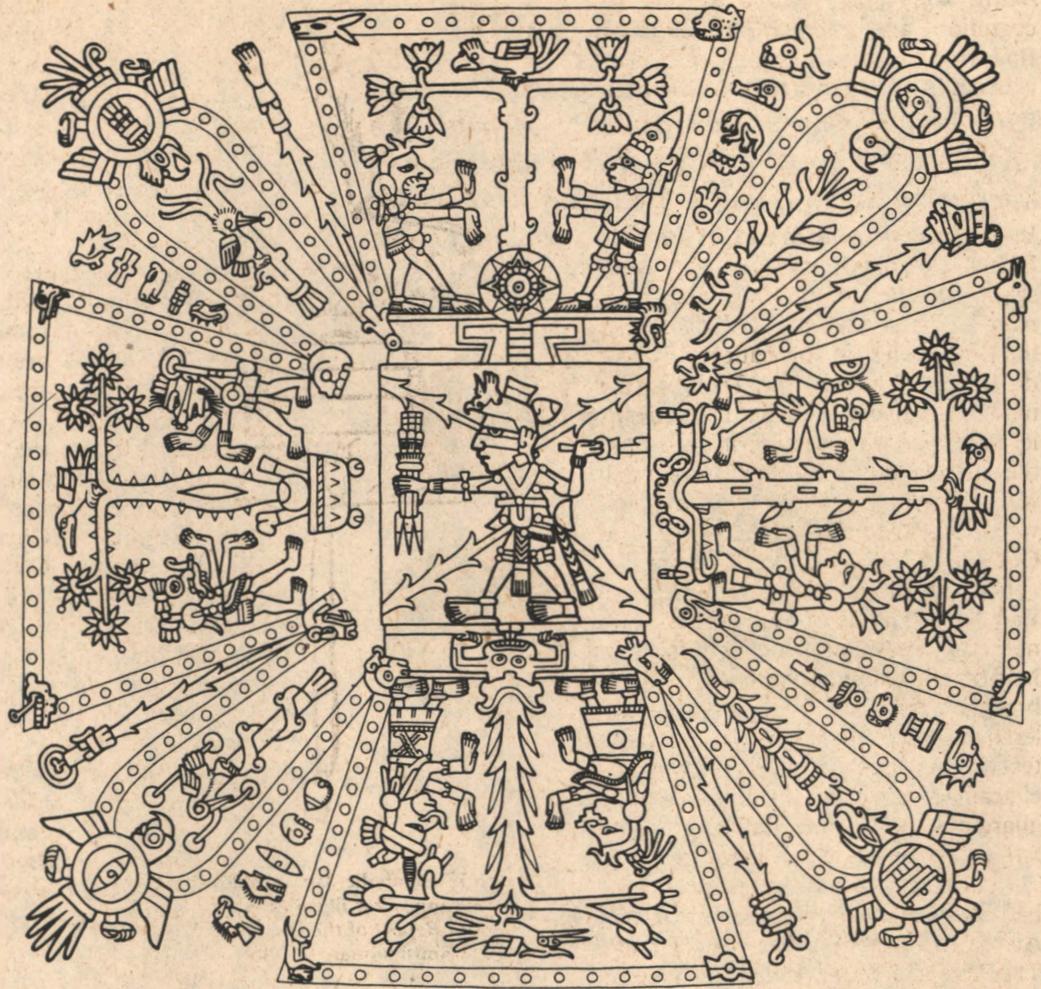
One of the ancient scrolls from the Nag Hammadi library found in Egypt compares the color of the Tree of Life to that of the sun, yet the fruit was arrayed in “traditional white”:

Now the color of the tree of life is like the sun, and its branches are beautiful. Its leaves are like those of the cypress. Its fruit is like the clusters of *white* grapes. Its height rises up to heaven.⁹

The *Book of Mormon*, which members of the Church of Jesus Christ of Latter-Day Saints claim was written by early inhabitants of the Americas, states that the Tree of Life and its fruit was exceedingly white (1 Nephi 8:11). Perhaps the ultimate superlative is “crystal white;” the Tree of Life is described as made of crystal, in a hymn of Eridu written by a poet-member of an early culture that once flourished on the shores of the Persian Gulf; writings from ancient Chaldea also report on the Tree's crystal fruit.¹⁰

Complete Tree of Life scenes always have at least two “guardian figures.” In Assyrian art they are in the form of winged genii (cherubim), sometimes with faces of eagles. Babylonian cylinder seals portray the scene with the two guardians as representing Adam and Eve. We find a similar depiction in the Mayan *Codex Tro-Cortesianus* where the old god and goddess are featured, perhaps to represent man's first parents.¹¹

Fig. 7 From the *Fejervary-Mayer Codex*, City Museum, Liverpool.



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Under or near the Tree of Life in many of its versions there is water—a prime requisite of life. Eden was irrigated by the Waters of Paradise. In Ezekiel's vision of the temple he saw the same waters flowing beneath the entrance. According to ancient Hebrew tradition, the Tree of Life was planted near the source of the water of life. In pre-Columbian art water is also represented, but in a different manner. Typical scenes show a monster's head below the Tree, which is identified as the mother earth. The monster carries water markings on its body and a torrent of water spews from its mouth.

In summary, the Tree of Life symbol is a message of many concepts, of religion, cosmology, myth and tradition. Because Mesoamerican Tree of Life scenes are more detailed than their Old-World counterparts, we are in good position to unravel the intricacies of symbolism and grasp the full meaning: Man and the Tree symbolize each other. If a man does not nourish his tree, the roots will wither and die and the branches will be barren. But if the

tree is nourished with faith, the roots will be strong and the tree will bear fruit for many seasons.

The similarity between Old World and New World development of the Tree of Life scenario is unmistakable. It provides clear evidence of trans-oceanic voyages in pre-Columbian times, of commerce and culture moving over thousands of miles, of artisans and traders exchanging ancient birthrights for new land and new horizons.

But there are scholars who do not support the theory of diffusion. In their view, the trans-oceanic voyages were "impossible;" thus, any similarity between Old World and New World Tree of Life themes becomes dismissible as "mere coincidence." Do you believe it?

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The Medusa Cell

It prowls in the eternal darkness, using its sensitive pseudopods to pull its body through the liquid world it lives in. When it encounters some other living thing, it frequently wraps its tentacles around the hapless victim, and draws it into itself.



Photo by Dr. Hanker's Laboratory, courtesy UNC News Bureau.

Photomicrograph of a Medusa cell. Dr. Jacob S. Hanker discovered the pseudopod-equipped eosinophil and named it after the many-tentacled jellyfish.

by Paul B. Thompson

THIS IS NOT the scenario of the latest Hollywood science-fiction epic. It is a description of the activities of the Medusa cell, a newly discovered variety of blood cell in mammals. The discoverer of this microscopic monster is Dr. Jacob S. Hanker of the University of North Carolina at Chapel Hill Dental Research Center.

Basically, the Medusa cell is a variety of the eosinophil type white blood cell. Eosinophils were first recognized 100 years ago by the Nobel Prize winning biochemist, Dr. Paul Ehrlich. The exact function of eosinophils is not known, although it is believed they form part of the body's defenses against foreign proteins and parasitical organisms. Particular types of cancer also cause an increase in the number of eosinophils present in the blood.

Dr. Hanker discovered the Medusa cell while conducting experiments in new staining techniques of blood samples taken from myeloid (bone-marrow) leukemia patients. After fixing and staining a blood sample from a patient whose leukemia was in remission, Dr. Hanker found that these unusual-looking cells have "feet." Tests on rats, and with blood samples from healthy humans, also showed the presence of the strange, predatory cells. In a report appearing in the medical periodical *Histochemical Journal* for November 1980, Dr. Hanker and several colleagues from UNC and Duke University demonstrated that the Medusas were not the result of chemical effects on normal eosinophils. Dr. Hanker noted "It could be that all eosinophils have these

A Few Terms . . .

Eosinophil—a type of white blood cell, exact functions unknown. The name stems from the Greek, meaning "eosine-loving." Eosine is a rose-colored dye used in cell staining. Chemically, eosine is $C_{20}H_8O_3Br_4$.

Myeloid Leukemia—cancer of the bone marrow. Blood cells are made in the bone marrow, including Medusas and other eosinophils.

Pseudopoda—appendages from an organism that give it mobility and can take hold of other organisms to be consumed. Amoebae are the best-known possessors of pseudopoda. In Greek, pseudopod means "false foot."

appendages that they put out only under certain conditions. We know that calcium and magnesium ions will make them get longer and that phosphate . . . will cause them (the pseudopods) to retract."

The mission of the Medusa cells is still a mystery. So far, they are the only cells in the human body known to have pseudopods capable of locomotion. It would seem that the Medusas might be microscopic hit-men, their targets foreign organisms and cancer cells, but some evidence points to a more sinister role. In some cases, the Medusa cells engulf normal cells in the bloodstream, including healthy red ones. Such predatory habits could contribute to serious anemia.

The big question about these newly recognized organisms is this: Are they more numerous in cancer patients because they are part of the body's defenses against malignancies, or are they more prolific as a *result* of cancer, and contribute to the slow death of leukemia sufferers?

The outlook among the groups at UNC and Duke is generally optimistic. Dr. John Laszlo, of Duke, has called the Medusas "extraordinarily interesting," and added, "It looks like they may be much more active than we ever thought."

In this area of intensive medical research, a discovery such as the Medusa cell has tremendous possibilities. Besides the obvious links to cancer studies, the new eosinophil could unlock whole new areas of attack on stubborn conditions such as allergies and parasitical infestations of the blood. Another interesting avenue stems from the fact that eosinophils are known to increase after exposure to radiation; thus the Medusa cell may hold a key to the treatment of radiation exposure, or conversely, may allow cancer-radiation therapies to be augmented without increasing radiation.

These developments lie in the future, if they exist at all. Right now, the Medusa cell presents many mysteries to medical researchers. Why, for example, does the Medusa attack and destroy other cells, while normal white-blood cells only attack bacteria? Why does the Medusa need such large pseudopoda, which sometimes extend up to ten times the diameter of the cell itself? Dr. Laszlo theorizes that the Medusa may have the capability of crawling out into the body tissues to combat parasites and cancer cells. Perhaps they attract other defensive organisms once they locate the dangerous materials.

The doctors are handicapped by the fact that they do not know all the functions of regular eosinophils. Since Ehrlich's discovery, the main diagnostic use of eosinophils has been the determination of their number in blood samples as an indication of certain types of disease. High levels of eosinophils can indicate any number of conditions, from scarlet

(Continued on page 182)

ATLANTIS: Lost and Found Again



The remarkable adventure of Dr. Ray Brown and the mysterious trophy he brought up from the depths must remain forever unverified since there were no witnesses.



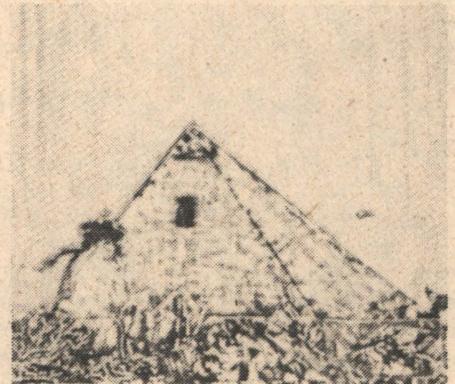
In 1975 Dr. Ray Brown displayed (bottom, left) a ball-shaped crystal he said he brought up from inside a sub-sea pyramid discovered while he was diving in Atlantic waters in 1968. The encounter was accidental, for the

Brown expedition was searching not for sunken evidence of ancient civilizations but for the sunken cargo of a shipwrecked Spanish galleon.

While circling the pyramid a third time, he noticed an opening (sketch, at bottom right); swimming through, he came inside a temple-like chamber. From a pedestal at center arose two metallic arms, with palms and fingers extended (top, left) to cradle a small, crystalline sphere. Diver's instinct told him not to tarry, but before starting upward the swimmer plucked the crystal from its nest and took it with him.

According to Dr. Brown, when the crystal is held at eye-level (top, right) three shadow-pyramids, and sometimes a fourth, can be seen inside, arranged in a sequential and staggered row, perhaps suggesting in miniature the angle-and-degree placement of Egypt's Giza pyramids.

(Photos and text excerpts reprinted by permission from *The Pyramid Guide*, issue of July-August 1975 (Number 18), P.O. Box 30305, Santa Barbara, California 93105. Editor Bill Cox states that the bi-monthly newsletter has 55 back issues available from nine years of publication; free resume and catalog of all articles is available on written request.)



by Jon Douglas Singer, M.A.

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Part IV

IN Part III our search for the lost Atlantis led us to the Caribbean and to islands in the Bahamas where we examined reports of underwater stone foundations, enclosures and other structures, and even submerged "cities." These off-island sightings were but introductory to the whole new chapter that Dr. Ray Brown contributed to the annals of underwater discovery when he encountered an unencrusted,

90-foot-high Egyptian-style pyramid under 22 fathoms of "Bermuda Triangle" water in 1968; and the crystal artifact he claims to have removed from it is just as mysterious today as it was in 1975 when Brown told his story after seven years of self-imposed secrecy. (See below; also pages 80-81, *Pursuit* No. 54, Vol. 14, No. 2, Second Quarter 1981.)

The late 60s and early 70s were busy times for Atlantis

investigators. While various groups of divers plumbed the crystalline waters off Bimini or Andros Islands, a California historian named Maxine Asher got interested in the mystery of Atlantis. She decided to organize an expedition to look for the lost civilization, which she concluded was located somewhere off the coast of Spain.

Mrs. Asher wrote in her book, *The Atlantis Conspiracy*¹ that she had become interested in Atlantis while studying the mysterious Etruscans. The latter were an ancient pre-Roman civilization that flourished in Italy from about 1000 B.C. until the Roman conquest of that nation, in 396 B.C. when the city of Veii was defeated.

Asher didn't agree with Greek archeologist A. G. Galanopoulos who believed that Atlantis was the volcanic island of Thera that was partially destroyed by an eruption of 1476 B.C. Asher thought that Galanopoulos' juggling of Plato's dates and geographical descriptions was too convenient and just didn't fit Thera. Instead, Asher thought that it was not impossible that the Cretans of Thera and the later Etruscans, whom she felt were distant relatives of the Cretans, were both colonies of Atlantis. In fact, Plato himself said that the Atlantean empire included Tyrrhenia, as the Greeks called the Etruscan land.

It appears that Dr. Asher's interest in organizing an actual expedition to search for Atlantis began in the summer of 1971, when she toured Spain, Italy and the Canary Islands. Asher was hopeful of success in Spain because many professors there believed in the reality of Atlantis, unlike their American colleagues who scoffed at the idea of lost continents.² She found what appeared to be clues to Atlantis while interviewing the enigmatic Basques, whose origins are to this day unknown. Also, she found curious inscriptions on the beach at Gibraltar which Prof. Cyrus Gordon (then of Boston University and now of New York University) said were in an ancient language. Unfortunately, Asher didn't say *which* language the writing was in. Other intriguing clues consisted of spiral designs found in a cave atop Mount Teide on La Palma in the Canary Islands. Asher thought that the spiral symbol was ultimately from Atlantis. She compared the ones in Spain to ones in Etruscan ruins in Italy.

In September of 1971, Asher's proposal for an anthropological course on Atlantis was accepted by Pepperdine University of California which offered six credits to enrolled students. During that time, Asher and a colleague, her former history professor, Dr. Julian Nava, founded the Ancient Mediterranean Research Association, which several of Nava's fellow professors also joined. Nava was a member of the Los Angeles City Board of Education, and Asher herself held a B.A. degree in psychology from U.C.L.A., an M.A. degree from California State University at Northridge (in history) and a Ph.D. from Walden University. Thus the academic qualifications of the two leaders seemed to be excellent.

In 1972 Dr. Asher met a Spanish scuba diver named Francisco Salazar Casero, otherwise known as Paco or Pantera.

This is the fourth and last installment of Jon Singer's serialized article on Atlantis. Originally scheduled to be printed in the Third Quarter 1981 issue, the final installment was postponed because of space limitations in that issue. The three previous installments will be found in Pursuit Nos. 52 (Part I), 53 (Part II), and 54 (Part III).

This diver joined A.M.R.A. and told Asher about his dive around the ruins of *four* sunken cities in the Cadiz region near Rota and Zahara de los Atunes.³ He had seen the four sunken cities during his long diving career of 26 years but hadn't publicized them for reasons of his own. He was apparently a skilled diver whose father and grandfather had also been divers. One of the cities, the one which was seemingly easiest to reach, was off the coast of Zahara de los Atunes and measured no less than 2½ square miles. The dimensions of the other cities aren't given by Dr. Asher, nor are their precise locations.

A.M.R.A. received advice from Dr. J. Manson Valentine, one of the discoverers of the Bimini Wall. He couldn't accompany the expedition, but another veteran searcher for evidence of Atlantis, Dr. Egerton Sykes of England, did join the group. An oceanographer, Bruce Rosendahl, who was a doctoral student at Scripps Institute, La Jolla, California, joined up, as did Edgar Cayce's granddaughter, Gail Cayce. Asher believed that psychic research could aid archeological research and she believed in the prophecies of Edgar Cayce, the American psychic who had predicted that traces of Atlantis would be found at Bimini in 1968. Among the divers were Paco's team from Spain and Americans Bill Farrell, Barry Sears, and John Steele. The psychic connection to the expedition was inspired in part by the Edgar Cayce readings on Atlantis and by Asher's reading of works by parapsychologists Dr. J. N. Emerson of the University of Toronto and Dr. M. Martiny of Institute Metaphysique de Paris. Emerson and Martiny believed psychic abilities could aid archeologists. A formal press conference was held by A.M.R.A. at the Los Angeles Press Club on February 13, 1973 and heard Dr. Nava announce that psychic abilities would be used by the expedition as a part of its methodology. Dr. Asher would be in charge of the psychic aspect of the research.⁴

The students arrived in Spain in July 1973. The program, as originally conceived by Dr. Asher, should have involved actual diving as well as classroom lectures. Bureaucratic and financial problems presented more stumbling blocks in the way of actual research than the organizers had anticipated. The situation became even more confused when A.M.R.A. found its proposed diving site located right next to the American naval base at Rota. U.S. officials in Spain were not much help because of frequent personnel transfers. Spanish officials seemed unable or unwilling to make up their minds about granting diving permits and played what amounted to a perplexing shell game ("now you have it, now you don't") on an international scale. These bureaucratic aberrations are chronicled in Asher's book, *The Atlantis Conspiracy*.

A sinister note was added to the black comedy of errors when charges of theft and bugging by persons unknown were brought to Asher's attention. For example, Paco Casero told her not to talk on the phone during a conversation held earlier in 1972.⁵ Other James Bond-ish episodes occurred in 1973. A friend of Asher's was followed and her luggage was lost or stolen; students complained of being spied upon, or that their rooms had been broken into and personal items stolen.⁶ A summary of the Asher expedition's many problems was published in 1973 in *Human Behavior* magazine.⁷

Asher suspected that several groups were responsible for the mysterious spying incidents and break-ins. First, she thought that a group of academics might be opposing her in order to safeguard their traditional views of history. Next, the Spanish government might be involved because officials

felt a need to protect mineral deposits and military installations; and national pride would certainly get a boost if it turned out that Spaniards were first to find evidential traces of Atlantis in Spanish waters. Nationalism in Atlantis research has been a problem elsewhere. In Greece, for example, some archeologists seem to have followed Galanopoulos in adhering to the idea that Thera is the true site of Atlantis.

Asher believed that other groups interested in following and harassing her expedition might have received backing or encouragement from the Russians, who, she noted, have studied Atlantis since at least 1916. The "Russian connection" will be discussed later in this article; but some of the best works on Atlantis in English are by Russian writers such as Zhirov.

Asher also speculated that one of the film companies which accompanied the expedition (and left during the red-tape foul-up which delayed and almost prevented the diving) might have engaged in skulduggery in order to scoop their rivals with the first film footage of Atlantean ruins. We should remember that this was still the era of Franco's paranoid police state, and it is at least conceivable that the sensation of being spied upon was more real than imagined.

At some point the nonsense had to cease. Finally, the California archeologist resolved to take matters into her own hands. Bill Farrell, Barry Sears, Roger Haydock and Gary Varney were among a group of divers selected. Also diving were Henry Denny, an anthropologist, and Stewart Slavin, of United Press International. Asher met with the divers in a secret session. The Spanish government was still harassing them, having ordered that no boats could be rented to the expedition. It was determined that a surreptitious dive would be made under cover of darkness on Monday, July 16, at the wee hour of 1:30 a.m.

The choice of site for the dive was somewhat influenced by Paco Casero's story about having found artifacts off the coast of La Calleta, Sancti Petri, and Zahara. He described the artifacts in lavish terms: there were megalithic stone bowls (some nine feet across), giant millstones, giant pottery; and there were roads, columns, even whole temples near the Zahara de los Atunes site. These claims are impressive, but as evidence of Atlantis they are also highly questionable. The Greeks and the Romans were in Cadiz in antiquity, and they had columns and giant pots (amphoras). Paco could have found artifacts from shipwrecks which he misinterpreted as Atlantean, and his roads and temples could have been submerged when an earthquake depressed the coastline at a relatively recent time. Asher's book has no photographs of these artifacts.

After the night's preparations had been completed the divers loaded their equipment into cars, drove to the beach and went to work. At 3 p.m. that day (July 16) Bill Farrell called to report that they had indeed found an ancient city underwater at the place Paco had reported, and they too had found columns, huge square blocks covered with green scale, amphoras, roads, and walls. Film was taken and pieces of stone from an ancient wall were brought up, as was an odd object that Dr. Asher identified as a giant bead.⁸ Unfortunately, no image came up on the film; it developed all blank except one frame that showed the divers holding a piece of rock.

Worse luck followed the "black Monday." On Tuesday and Wednesday a storm prevented further diving. Suddenly Spanish police swarmed over the beach. Asher now had to contend with reporters wanting film and interviews, even as

students' rooms continued to be entered and searched, and more bugging devices were reported in use.⁹ On Thursday there was a press conference about the discovery. The news that Atlantis had been found was flashed around the world. A UPI dispatch of July 29, 1973 reported a "6,000-year-old City is found off Spain."¹⁰ The report said that Egerton Sykes, representing the Cadiz expedition, had told a news conference that roads, walls and columns had been found off the southwestern coast of Spain. Sykes declared that the structures were neither Roman nor Phoenician because the area in which the city had been found had been above water 6,000 years before, but was already submerged in Phoenician and Roman times. There were remains from Phoenician and Roman times off the coast of Cadiz, but these were found much closer to shore and therefore had to be younger than the ruins the Asher expedition found in deeper water. According to Sykes, the drawings and photographs of artifacts found by the divers was evidence of a civilization much earlier than the Phoenicians'.

Later, William Corliss, from whose sourcebook on archeology I derived this account, told about a UPI "update" which branded the fantastic story as a hoax. The second story was printed on August 6, 1973.¹¹ In *The Atlantis Conspiracy*, pages 65-67, Asher described how it seemed that the time of the press conference was like a lull before the storm. Bad luck set in again, like bad weather, and some of the divers as well as Asher and Sykes were interrogated by a Spanish naval court. They refused to divulge the location of the sunken city, and the Spanish officials persisted in their efforts to convince Asher that there was no Atlantis. She and the others were released after being summoned to reappear in ten days. By then the expedition was breaking up. Some members ran out of money and went home. Others went with Asher to Ireland, on a last-ditch effort to salvage their hopes by finding clues to Atlantis in the Emerald Isle. Asher thought there was evidence of a Celtic connection to Ireland via legends of lost islands such as Hy-brazil and recurring spiral designs on megalithic ruins. Ultimately, the expedition ended in failure, although Dr. Asher herself seemed firmly convinced that she had succeeded.

A.M.R.A. still exists as a working organization, despite its many misfortunes and the search that ended in fiasco. The political climate in Spain has greatly moderated since King Juan Carlos replaced General Franco as head of state. It is to be hoped that the dives off Cadiz may one day be resumed in an atmosphere of international cooperation such as would promote investigation, not hinder it. The possibilities invite a new try. A member of the 1973 expedition, who shall remain anonymous for the moment, told me that there really is an ancient underwater ruin off Cadiz. Asher's party could have found the Phoenician Temple of Melkart, as the Phoenicians called Hercules. Paul McKendrick wrote in *The Iberian Stones Speak*¹² that the temple is 12 miles from Cadiz and underwater with the former coastline. Nets pulled aboard fishing boats operating in the area occasionally disgorge artifacts of obviously ancient origin. In summary, however, the Cadiz investigation is one more chapter in the Atlantis story that has ended in question marks, and once again the resolute minority of true believers has had to look elsewhere for confirmation.

¹⁰ For awhile interest in Atlantis ebbed, or returned to the Bahamas. John Steele and Gary Varney participated in the David Zink Poseida expeditions to Bimini. Varney didn't

find anything conclusive in 1973, but as described in Part III of this article, the stone artifact he found near the Bimini Wall did look like an animal head.

The hiatus in news of Atlantis research lasted until April 1979, although scientists such as Dr. Zink, Pino Turolla and Prof. Valentine continued to study the Bahamas, and the Bimini Road made appearance on NBC-TV's program, *In Search Of* . . .

In April 1979 I happened to catch a brief item on WABC-TV's *Eyewitness News* which relayed a report from the Russian newspaper *Izvestia*, that Soviet scientists had photographed sunken staircases and walls some 275 miles off the Portuguese coast. A month later, *The New York Times* gave a lengthy account of the Russians' discovery, and credited the find to an oceanologist, Vladimir Marakuyev. His expedition was engaged in a study of oceanological matters unrelated to Atlantis, and came upon the ruins quite unexpectedly. The expedition had completed its assignment two years before, and the article did not say why the photographs and knowledge of their existence had been so long withheld.¹³

Marakuyev's ship, *Moskovsky Universitet*, was over the undersea Ampere Seamount, a dormant volcano. The submerged camera photographed the mysterious stone structures at a depth of 200 feet. The pictures revealed a short wall, 3½ to 4 feet long, made up of 8 stones, 4 squarish and 4 of rounded shape. Marakuyev's colleague, Andrei Aksyonov, showed photographs to unnamed "specialists" who agreed that the wall was a typical, ancient man-made structure, not a natural formation. Unidentified Danish experts scoffed at the photographs and said they showed natural phenomena.

Aksyonov explained that Marakuyev was suffering from a heart ailment and couldn't personally show the photographs. Nor had Marakuyev made any plans to return to the Ampere Seamount; instead, Dr. Aksyonov was making preparations for his own examination of the site.

An article about the Russian discovery in the *Boston Herald-American*¹⁴ gave a number of details that did not appear in the *Times* story. The Boston paper reported the depth of the alleged ruins as 300 to 600 feet, not 200 as the *Times* article stated. The name of the ship was *Kurchatov*, not *Moskovsky Universitet*. According to the *Times*, only two photographs were taken at the site; but the *Herald-American* said there were eight, and went on to state that the ruins were located on a submerged archipelago—a very large archipelago having the shape of a horseshoe. The Boston paper also asserted that Aksyonov had already made his voyage to the Ampere site; the *Times* said only that Aksyonov was planning to use a minisub in his examination of the ruins.

Yet another account of the Seamount discovery, printed in *Fate* magazine,¹⁵ apparently combined information from a Russian periodical called *Light* with a *Chicago Tribune* story. The *Fate* article said the name of the vessel from which the photographs were taken was *Academician Kurchatov*, and the photographs showed not just a few stones but a whole city, with what appeared to be the remains of houses, defensive walls, and a giant staircase. Thus one more piece was added to the complication of confusion.

Egerton Sykes, the British Atlantis researcher, published some articles on the controversial Seamount ruins. Sykes theorized that the staircase was not a natural formation because staircases do not occur in nature.¹⁶ However, there are natural underwater staircase-formations. One was found

underwater in 1964 by French oceanologists Captain Houot and Lieutenant de Froberville as they plumbed the ocean depths in their bathyscape *Archimede*. And the Giants' Causeway on Ireland's coast is indeed famous.¹⁷

Sykes suggested that the Ampere site was probably not Atlantis but the home of some contemporaneous culture, located on what had been dry land attached to Africa and later became part of the African shelf. According to his estimate, submersion occurred about 6,000 B.C. Sykes also cited another Soviet scientist for work done at the Ampere site: Dr. Marcello Vasconelos of the USSR Fishery Research Institute.

In a subsequent analysis Sykes noted that there seemed to be some confusion about the ruins' precise location. He felt that the spot was most likely near a triangle formed by the Azores islands of Santa Maria and St. Miguel with the Formigas Rocks, all in the easternmost part of the Azores. It is where Sykes thought that Falias, the legendary city of Irish sage, was located.¹⁸ Apparently the Russians' disclosures did not jibe with Sykes' view of what Atlantis' ruins might look like; his conception was adduced from a combination of studies involving the geology of the Azores and references in ancient Greek or Celtic legends.

In the final issue of *New World Antiquity*¹⁹ Sykes printed a fulsome account of the discovery and what the Russians themselves told and showed their own people. An associate of Sykes named Eliot translated an article by M. Barinov printed in 1979 in the Soviet magazine *Znane-Sila*. The controversial photos were also published in that magazine but were not reprinted in *New World Antiquity*.

Barinov's story has a few differences from the accounts published in the Western press: Marakuyev's ship was called *Academician Petrovsky*, not *Kurchatov* and not *Moskovsky Universitet*, and the date of the exploratory voyage by the ship of whatever name was January 1974, not 1977 as *The New York Times* had reported.

Barinov said the first photograph shows stone blocks on the upper edge of a wall whose facing resembles the swallow-tail style of the Kremlin. The blocks in the wall are about 1.5 meters high and a little more than that in length. Another photograph shows the same wall from a different angle and depicts both sides of the wall, viewed diagonally. Seaweed is clearly visible. A third photograph shows a structure at a different location and was taken at the peak of Mt. Ampere. There are five broken steps covered with sponges. When developed, these photographs were compared with others in the archives of the Institute of Oceanography and were found to be unique. There was no resemblance to underwater formations in American oceanological texts, either.

The Ampere site interests Atlantis researchers because it is on the submerged archipelago known as the Podkova Archipelago (Podkova means "horseshoe" in Russian). In 1964 the Russian Atlantis expert N. Zhirov wrote that the Podkova site was an ideal hunting-ground for lost-continent stalkers.²⁰ Zhirov even named the Podkova Archipelago *Eritea*, after the lost Red Island of Erithea which Hercules visited on one of his quests. Barinov also quoted American oceanographers B. Hizen (correction: Heezen—J.S.) and M. Tarp who wrote in *The Atlantic Floor* that the northern half of the archipelago was still poorly explored. Other interesting observations: the mountains are geologically young and date from mid-Tertiary times to the contemporary period, an epoch which embraces the Platonic dating of the Atlantean civilization; and the Podkova Archipelago is con-

nected to the islands of Madeira, Porto Santo and Dezerta, and the submerged Gettysburg Bank which was found only 100 years ago.

The Russian discovery seemed to clinch the question of whether or not Atlantis existed, but grave doubts lingered. The *Christian Science Monitor* suggested that the whole "discovery" was a fraud intended to conceal the activity of Russian spy ships such as the two submarines sighted near Terceira in the Azores in 1979.²¹ Azores officials were skeptical of the Russian discovery and felt that the ships were really spying on U.S. military installations in their islands.

In the April 1980 issue of *Fate* magazine Jerome Clark noted that Aksyenov had changed his story about the sunken walls and staircases, now said that he had only been talking with tongue in cheek, now insisting that the formations were natural, not man-made.²²

I will stick with the original story about the Ampere Seamount ruins until more evidence of their natural origin is obtained. The descriptions of the photographs seem to indicate man-made structures, but we need independent confirmation of the site's natural or artificial origin.

At the moment it appears that our search for Atlantis has failed, but perhaps we're on the verge of success. Lots more looking lies ahead. Mt. Ampere can be added to the list of sites of sunken cities. We should look at the almost-unexplored sites off the coast of Yucatan. Perhaps we can get another, better look at Paco Casero's enigmatic sunken cities off the coast of Zahara, near Cadiz. We must not forget the various locations of enigmatic stone equestrian statues.

An age-old mystery may be racing toward conclusion. Then folklore will become history and humankind's past will be enriched—or, an old myth will have been preserved like a stubborn ghost that refused exorcism.

Addenda

New data on Bimini. On Saturday, June 28, 1980, the television program "In Search Of . . ." (formerly on NBC and later on CBS) broadcast a film about the Bimini Wall. A geologist from the U.S. Geological Survey dove over the site with a three-man team and found that the rocks were beachrock after taking 18 core samples. However, Leonard Nimoy, the narrator, pointed out right-angle turns and gaps in the formation which showed it to be unlike other Bahamian beachrock formations, and more man-made than natural. The program did not mention Proctor's Roadway, which is beyond doubt man-made. Also of interest was the carving of a fish found on dry land in North Bimini. This artifact may be Atlantean; or it may be Lucayan Arawak Indian work. Other artifacts were shown, among them a series of straight lines carved in the sand which pointed in the direction of a well (referred to in Part I of this series). It was noted that Ray Brown's crystal sphere from the underwater pyramid seemed to repel metal, as if possessed of "anti-gravity" properties.

The sunken cities near Yucatan. *Beyond Reality* magazine had an article by Bryce Bond, "Bryce Bond Interviews Ivan Sanderson," in its "UFO Special Report No. 2, 1979." On page 48, Sanderson was quoted as saying that, as he flew over the coast of Yucatan he saw causeways and whole towns under about 30 to 100 feet of water; they were as much as 10 to 15 miles off the coast and easily seen. He thought the builders were the people of Manoa, the legendary lost city of the Amazon.

The location of Robson's Island. A detailed discussion of the *Jesmond* case can be found in a magazine called *1980 UFO Annual* (Gambi Publications, Brooklyn, N.Y.). In his article "Atlantis Rises!" William L. Moore specified the exact location of the mysterious volcanic island from an account published in the *New Orleans Daily Picayune*. Coordinates were Latitude 31°30' North, Longitude 24° West. Noting that Captain Robson's hometown was Jarrow, in Durham County, England, Moore wondered whether some of the *Jesmond's* artifacts might be found listed as "Egyptian relics" in some nearby antique dealer's shop.

A Greek researcher doesn't care for Thera. Not all the Greek researchers on Atlantis accept the Thera theory. The headline on a *New York Times* article published in the summer of 1979 intoned: "Greek Backs Plato Theory on Where to Find Atlantis."²³ The Greek gentleman was author Vasilios Paschos, and the occasion was a press conference in Athens at which he discussed his book, *The Atlanteans, Mr. Daniken, Not the Gods*. In this work, apparently not yet published in English, Paschos wrote that the Atlanteans, not ancient astronauts, founded civilizations from South America to the Middle East. Crete wasn't Atlantis; but Crete, Thera and the Bahamian ruins were colonies of Atlantis. Paschos said Atlantis was indeed located in the Atlantic, but the *Times* noted that drillings by the oceanography ship *Glomar Challenger* had failed to find such a continent.

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Deep-Sky Earthquake Predicting

by Allan J. Gris 

As a Fortean astrologer living on the San Andreas fault-line, I have taken a look at the positions of the heavenly bodies when earthquakes hit; it would be nice to be able to predict the Big One!

After spending enormous globs of time agonizing over the thousand-or-so possible angular relationships between the Sun, Moon, and planets, I have discovered that solar eclipses and nodes of the Moon play an important part in the earthquake-forecasting business.

In fact, positions of these eclipses and nodes are key factors in determining earthquake seasons, and I use the word "seasons" advisedly because there are distinct spans of time during which we are likely to experience earthquakes. There is, in astrological parlance, "earthquake weather" caused by factors in the Deep Sky. Earthquakes may not be caused by forces below the ground at all, as the recent rash of sky-quakes might suggest to inquiring minds.

All the talk about earthquake seasons may seem to be an easy target because of a fashionable twentieth-century bias against astrology, but let me caution the residents of academe that my findings in this article teeter on the very brink of being kosher astrophysics. One should also bear in mind that the geophysicists know absolutely nothing about whatever it is that causes earthquakes, and are in no position to kibitz any halfway-sane theory.

But they will agree that "stress" is central to all theories about earthquake causation. Conventional thinking (a contradiction in terms) is that the molten metal core of the Earth cools and shrinks, pushing tectonic plates around, crunching them into each other and creating stresses that are only relieved by earthquakes.

Too bad we have no certain knowledge the Earth's molten core exists. We assume the planet has a molten core because volcanoes spew molten rock. Neither do we know for sure that tectonic plates exist; we simply put pins in a map where earthquakes occur, then pencil in the rest of the tectonic plate the way we think it should look; it's like making a connect-the-dots puzzle. This system is silly. All it really says is: earthquakes happen where earthquakes happen. (I can see Charles Fort smiling.)

Now, about seismic activity and these solar eclipses and nodes of the Moon: Solar eclipses happen when the Moon is between us and the Sun; they are new moons that blot

out the light of the Sun; times when solar and lunar forces are concentrated on the surface of the Earth.

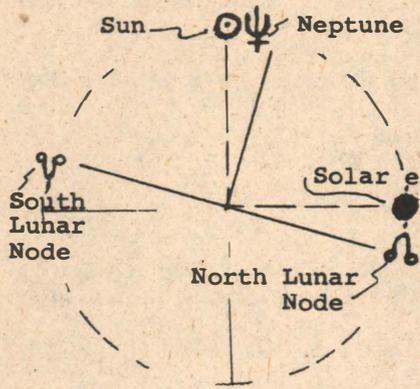
The lunar nodes mark the places in the orbit of the Moon when it crosses the ecliptic. The ecliptic, as you may know, is merely the path the Sun and planets follow as they go across the sky. Let the Sun draw a line as it moves through the sky, and that imaginary line is the ecliptic. Because the axis of the Earth is inclined 23°, the Moon gets to cross the ecliptic twice during a lunar month, so there are two lunar nodes.

Lunar nodes and solar eclipses are closely related in that they both have to do with times when the Moon is either directly between us and the Sun, or between us and other fixed stars on the galactic plane—just where it should be to set up stresses in terrestrial fault-lines. So there's no question that the points of an eclipse and the nodes mark the place (celestial longitude) of events that set up stresses in the tectonics of our planet.

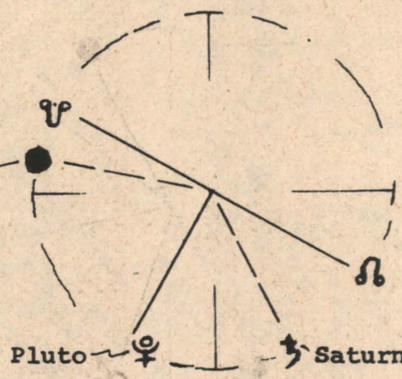
But, do earthquakes happen at the moment of a solar eclipse, or when the Moon crosses the ecliptic? No. Big quakes happen *after* eclipses of the Sun. Eclipses "set the stage," and so do the lunar nodes. They do this by forming geometrical patterns—angles—with planets and the Sun. When the Sun and planets form certain aspects to eclipse points and nodes, there will be quakes, big quakes. Mother Earth takes a real pounding when the planets conjoin, sextile, square, or oppose these theoretical points. Slow-moving, massive outer planets such as Jupiter, Saturn, Uranus, Neptune and Pluto make contact with nodes or eclipse points to "set the stage" while faster-moving Mars does the triggering.

Out of several-hundred earthquake charts, I have selected a dozen of the meanest and nastiest—all with Richters greater than 8. In charts erected for these big quakes, "the stars" are square, sextile or in opposition to each other; all from the wrong signs, and are otherwise misbehaving badly. I will spare you the astrologese.

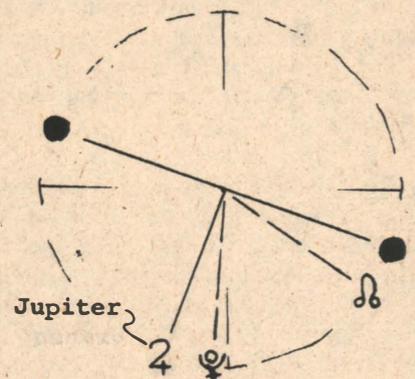
The first of the twelve earthquakes is the New Madrid, Missouri, earthquake. Actually, there were three temblors which occurred on December 16, 1811, and on January 13 and February 7 of 1812. During all three quakes, Neptune was square (90° from) the nodes. For the December quake, the Sun was square to a total solar eclipse; for the January quake it was sextile (60° from) that same eclipse point; and



Earthquake 1 New Madrid



Earthquake 2 Charleston



Earthquake 5 San Francisco

for the third earthquake, the Sun was semi-square (45°) from that very same solar eclipse point.

Just a word about these 45° , 60° and 90° angles. These angular relationships are the cornerstones of classical astrology and for over 6,000 years have been valid, and they continue to be valid in sky studies of earthquakes. Esoteric astrologers say these angles have something to do with "the laws of crystallization." In every-day language, that means if there are no aspects formed between planets, nothing gets done.

I cannot even begin to explain what is meant by "the laws of crystallization" except by pointing to a large, six-sided quartz crystal that sits on my desk. Snowflakes and honeycombs are also six-sided, and there are cubic and tetrahedral crystals, so I am slightly confused. If you have a non-sense handle on the laws of crystallization, please drop me a line.

Back to earthquakes. The second mega-quake on my list trashed out Charleston, South Carolina, at 9:51 p.m. on August 31, 1886. Pluto was 90° from the nodes, and Saturn was 120° from the solar eclipse that occurred earlier that year, on March 5.

One of the heaviest quakes ever to occur on this planet hit Alaska—all of it—on September 10, 1899, when Pluto was conjuncting a solar eclipse point, and Neptune was right on the descending lunar node. Mars was square to another solar eclipse point. Other astrological yummys too numerous to mention here made my hair stand on end.

The No. 4 big earthquake in this series of twelve clobbered Colombia on January 31, 1906. This Richter - 8.6 crystallized when Uranus was semi-square (45°) from the nodes and Saturn was opposing two rather recent solar eclipses at the same moment.

The fifth temblor is almost synonymous with the word "earthquake." The great San Francisco earthquake and fire happened in the pre-dawn hours of April 18, 1906, and nobody knows for sure what the Richter strength of this quake was, because it broke the seismograph! Pluto again was 60° from the nodes, with Jupiter square to two recent solar eclipses; and the balance of our heavenly host were throwing evil aspects at each other, guaranteeing a memorable event.

The next quake was an 8.6, and it did a job on Chile. Mars was right on the nodes; Saturn was 45° from them at the same time; and Jupiter was 120° from a recent eclipse of the Sun. This August 17, 1906, earthquake was the third

in that year to exceed Richter-8. For end-of-the-world buffs, 1906 was a real fun year.

Earthquake No. 7 on my list was an 8.6er which reduced Tien Shan, China, and vicinity to rubble. On the day it happened, January 3, 1911, Jupiter was inching its way over a solar-eclipse point, while the nodes were transiting a previous eclipse-point in Taurus. The Sun was also 60° from that same Taurus solar eclipse.

The eighth boffo-shaker of my hit parade almost erased Kansu, China, on December 16, 1920. It was a Richter-8.5 that went off, with the Sun, Jupiter and Saturn all at 45° from the lunar nodes; and Mars was squaring a recent solar eclipse which happened in the dreaded sign Scorpio.

A brief aside: Since I've mentioned Taurus and Scorpio, it's time to say that these two signs of the Zodiac are hot earthquake signs. Once Newton was chatting with Kepler and said any new moons "that take place in the early degrees of Taurus, and especially with the Pleiades (29° Taurus) will produce earthquakes." Scorpio also figures strongly in big quakes, as the charts of superquakes will testify.

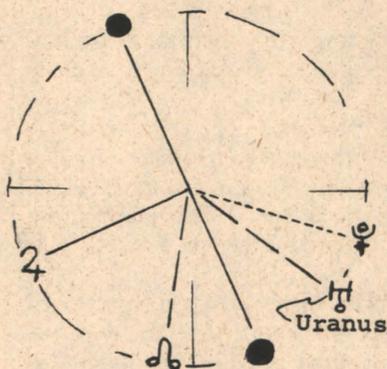
Now, as for earthquake No. 9: it was an 8.5, and it rearranged much of the real estate in Japan on March 2, 1933. At that time, Mars was right on the nodes as the nodes went traipsing across a recent eclipse of the Sun, which itself was opposing two earlier eclipse-points. As if that were not sufficient evil unto the day, the Sun was in opposition to the whole shebang at that moment. And, of course, Pluto figured in this mess, a fateful 45° from the node crossing the eclipse-point.

The tenth super-shaker put the fear of God in all of Asia, it was that strong; the Richter-8.6 happened on August 15, 1950. Pluto, yet another time, was 45° from the nodes, and Mars was directly opposite a point which marked an earlier eclipse of the Sun. These, along with other testy aspects, were certain to bend Mother Earth out of shape that day.

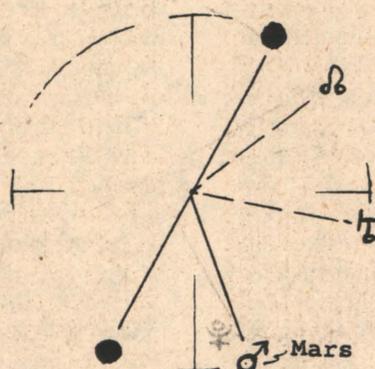
The next terrible temblor was an 8.6 that made land rise and fall in Alaska, most notably in the Prince William Sound area. The ocean floor rose 55 feet in places over a line hundreds of miles long. Air photos showed changes in harbors, among other large areas jarred from below. The press called the quake the "Good Friday Earthquake" since the seismic slam occurred two days before Easter in 1964, on March 28. Pluto was 45° from an eclipse, and Jupiter was exactly square to another total solar eclipse. Uranus got into the act

(Continued on page 183)

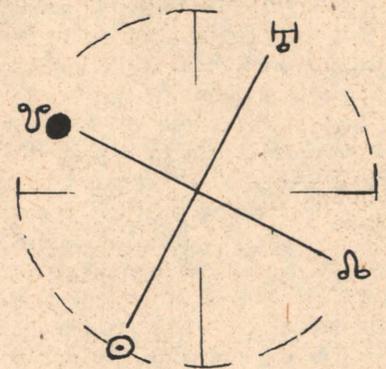
Illustrations by the author



Earthquake 11 "Good Friday"



Krakatoa Eruption



Mt St Helens Eruption

Books

MANLIKE MONSTERS ON TRIAL, Marjorie Halpin & Michael M. Ames, editors (University of British Columbia Press, Vancouver, B.C., Canada, 1980, 336 pp., illus., biblio., \$24.95)

Reviewed by George W. Earley

This is a partial record of papers presented at the first-ever symposium held by The Establishment on the subject of the Sasquatch. I say "partial" because the symposium organizer, Professor Halpin, admits early on that she has not included all the papers that were presented. She also doesn't tell us what was omitted or why. It could be "merely" economics . . . the book is already pretty costly . . . or (he said, muttering darkly) it could be that The Establishment was disturbed by the topics of certain papers and chose not to give them permanence nor the imprimatur of university press publication. Whatever the reason, we are the losers.

Thanks to Barbara Wasson's privately published *Sasquatch Apparitions* (P.O. Box 5551, Bend, Oregon 97701, \$6.95 ppd.), I learned the titles/authors of four papers not included in the Halpin-Ames work. There could be others, but the ones Wasson identified are: "Why There Has To Be A Sasquatch" by Dr. Carleton Coon, who was before his retirement one of the giants of physical anthropology; "Sasquatch Believers vs. Skeptics" by Dr. Grover Krantz, one of the few physical anthropologists actively engaged in Sasquatch research including field hunts; "Credibility of Sasquatch Witnesses" by Barbara Wasson; and "Theoretical Importance of Higher Sensory Development Toward Avoidance Behavior in the Sasquatch Phenomenon" by James R. Butler. That these four people (and who knows how many others) were present and read papers to the symposium is not noted in the Halpin-Ames book in any way.

The book gets worse, not better, the further one digs into it. Of the 21 papers, only six deal with actual investigations and to get to them you have to first slog through 236 of the book's 300 pages of symposium papers. The first two sections—"Monsters in the Forests of the Mind" and "Manlike Monsters of the Native New World"—are less concerned with the possible existence of the Sasquatch than of telling us about all the strange and fanciful creatures of Amerindian folklore.

I quite agree that there is a lot of interesting material buried in folklore. I also agree that in some instances it is likely that "night monsters" are less a reflection of reality than of fears conjured up in the human mind as a way of explaining events that would otherwise be inexplicable. But if one is to judge it by this book, the symposium was so weighted on that aspect of the question as to allow scarcely any reasonable evidence arguing for the existence of a humanoid creature not yet put into the zoos, museums and textbooks of the world. It is almost as though the symposium, like the Condon UFO study, reached a conclusion before it began and then went on to tailor everything as much as possible to fit that conclusion.

I don't regret buying my copy of *Manlike Monsters on Trial*. There is much in it of interest to me and, I suspect, to many other SITU members. But (and here perhaps the fault is mine and so I invite Dr. Halpin to write in rebuttal)

it was my expectation from the symposium's advance publicity that a concerted effort would be made to truly examine the evidence. I looked for an open dialogue, not only on the possibility of the existence of the Sasquatch, but of the mind-set within the scientific establishment that makes searching for such mystery monsters so difficult that it must be the amateurs who do it while the professionals sit home denigrating those in the field.

Why was Krantz's paper not included? Or that of Dr. Coon? Did they challenge too hard this ingrained reluctance to *search* for something new rather than *research* the old and tried and true?

I admit to being angry—not so much at this book, which is but a flawed mirror of the symposium, but at the unwillingness of the academic community to truly come to grips with the issue. I did not expect the symposium to endorse the existence of the Sasquatch, but I do not think it unreasonable of me to have expected a more open-minded assessment of the issue.

CELESTIAL PASSENGERS: UFOs and Space Travel by Margaret Sachs and Ernest Jahn (Penguin Books, New York, 1977, 220 pp., illust., \$2.95 paperback)

Reviewed by Kim L. Neidigh

From the beginning, the field of ufology has been inundated with introductory texts which attempt to explain and justify the subject to the general public. Except for the works of Frank Edwards and John G. Fuller, however, the general public reads few books on UFOs and the researchers who do read them have no need for additional rehash of the classic cases.

Two introductory books on space and UFOs that "everyone" should read are John Macvey's *Interstellar Travel* and Iain Nicolson's *The Road to the Stars*. Although not as comprehensive as these two, *Celestial Passengers* is, in some ways, better than most other "survey" books. Many of the incidents dealt with are those personally studied by NICAP's New York investigator Ernest Jahn and are, therefore, not treated elsewhere. The more famous cases are recounted in a manner that sustains the reader's interest at a high level—especially the chapter which deals with the 1952 Washington, D.C. sightings.

To their credit, the authors cover much more than UFOs. There is an excellent section on the mystery of tektites. Also discussed are the space program, with important coverage of spinoffs, colonies in space, and the search for extraterrestrial intelligence.

The book does have a few problems. The organization is rather disjointed, one subject moving into another with little transition; and there is neither bibliography nor index. And, inevitably over the course of four years since publication, the information about the space shuttle has become outdated.

By itself, *Celestial Passengers* suffers from a number of deficiencies. By reading this book in conjunction with the Macvey and Nicolson books cited above, the student of elementary ufology will gain an excellent understanding of space exploration fundamentals and related subjects.

PROJECT IDENTIFICATION by Harley D. Rutledge, Ph.D. (Prentice-Hall, Inc., Englewood Cliffs, N.J., 1981, 265 pp., illust., \$10.95)

Reviewed by Robert Barrow

Not to appear trite, but there is bad and good news to relate. The bad is that Prentice-Hall, currently responsible for publication of several stimulating books on UFOs, will soon end its craving for such writing. "While P-H will continue to publish books that are already under contract," senior editor Tam Mossman explains, "we're restricting our future lists to books of self-help, self-improvement, and guides for ambitious professionals on how to improve their on-the-job efficiency." Which, she succinctly advises, "kind of leaves out UFOs."

The good news is the book at hand, one that is consistent with other UFO-related offerings from P-H. *Project Identification* shows, not armchair scientists who claim to be working on the UFO mystery, but science actually at work on direct observations of the phenomenon as it occurs.

Well-read UFO researchers will realize that this book is not just some hastily written rip-off. It could be said as a matter of fact that the book was eight years in getting published. The year of its conception was 1973, a time when UFOs made frequent visits to areas around Piedmont, Missouri and bizarre yet credible UFO reports multiplied. According to UPI, hundreds of sightings had come to light since February, 1973; a number of them were made by highly impressive witnesses and written up in Missouri newspapers.

By May, amidst continuing, apparently intense, UFO activity, a handful of scientists from a couple of Missouri universities had become sufficiently concerned to organize an investigation they dubbed "Project Identification." This was no mere study group. The scientists, some of whom had themselves observed UFOs, initiated for their project the use of advanced instrumentation such as electromagnetic and color-spectrum analyzers, ultrasound detectors, telephoto cameras, telescopes, etc.

Project Identification was headed by Dr. Harley Rutledge, chief of Southeast Missouri State University's department of physics, the book's author. In the best scientific tradition, he tells the Missouri UFO story step by step, carefully examining pieces of the puzzle until he comes up with some ultimately irresistible conclusions. Foremost among these is that UFOs are real and intelligently manipulated, and that "their game is to gradually create acceptance by repeated appearances . . . More people will 'believe in UFOs.'"

Particularly important to keep in mind is that Dr. Rutledge, for one, started out as a UFO skeptic and ended up a firm believer in UFO existence and in the screaming need for further investigation.

As this review was in preparation, the reviewer heard rumors of some vague "rumblings" among certain UFO researchers about the book. Whether these individuals object to something about the project's methods, or are merely jealous that they never have performed and never will perform as scientifically as the book describes, is unknown.

We do know that Dr. Rutledge and his associates are awaiting the resumption of UFO activity in southeastern Missouri where, once again, elaborate state-of-the-art instrumentation will confront state-of-the-phenomenon UFOs.

THE CASE FOR LIFE AFTER DEATH by Elizabeth McAdams and Raymond Bayless (Nelson-Hall, 1981, 153 pp., \$14.95)

Reviewed by Sabina W. Sanderson

The publisher's blurb is correct in stating that this book "contains no trace of the sensationalism that mars many previous works in the field" but wrong in assigning it the status of a "major reference work." It is nothing of the sort.

This is a slim book, literally and figuratively. Its 153 pages are set in quite large type and, while it covers a wide range of subjects, it does so in a rather superficial way. It is not always objective (e.g. the chapter on Raudive tape recordings, one of Bayless's pet theories), and can hardly be called exhaustive. The treatment of animal hauntings gives three examples in a chapter that is only three pages long.

There is good material listed in the contents but little actual discussion of the cases reported and almost no consideration of alternative explanations. There is, in fact, almost naive acceptance of each type of phenomenon as evidence of life after death. Too many questions are left hanging in mid-air for want of alternative explanations one should expect to find mentioned at least, and better, discussed. Moreover, there are some puzzling omissions.

Why, among all the reports on the work of a number of mediums, both vocal and physical, is nothing said about Eileen Garrett? Whether the omission was deliberate or accidental is questionable. But it is my recollection that Eileen Garrett was not convinced that there is life after death; and this leaves me with the unhappy thought that the authors may have suppressed some common-knowledge evidence because it got in the way of their theory.

Lack of balance in this book is further illustrated in the treatment accorded Hereward Carrington. Every time he is first mentioned in a chapter, he is identified as the very good and greatly admired friend of Raymond Bayless (the co-author) and as one of the greatest investigators of all time. Four times in a book of this length is three times too many and smacks of name-dropping. Carrington was indeed a very fine investigator, but one doubts that he would have been impressed by all these "honorable mentions."

The final chapter, "Weighing the Evidence of Survival After Death," is only two and a half pages long and boils down to "Yes, Virginia, there is a super-ESP hypothesis concerning all this, but we think our idea is better."

At most, this book is a one-sided introduction to a many-faceted subject. Included are references, a very brief bibliography (many works listed in the references are not included), and an index.

MISSING TIME by Budd Hopkins (Richard Marek Publishers, New York, 1981, illust., 258 pp.)

Reviewed by Robert Barrow

Time is basically the only ingredient missing from *Missing Time*, for author Hopkins has written one of the best UFO books of 1981, fresh and exciting in its approach.

Often working in conjunction with noted UFO investigator Ted Bloecher, New York artist Budd Hopkins has extensively studied nineteen UFO abduction cases since 1976; seven of

them are presented here in considerable depth, frequently remarkable for their similarities and "clear patterns" evidenced in witness descriptions.

Missing's successive pages of transcripts, gleaned from tape-recorded hypnosis sessions with alleged abductees, offer fascinating reading; witnesses, in more instances than might make either author or reader comfortable, tell of experiencing *repeated* encounters with their captors (e.g., childhood and adult incidents). It must be emphasized that all hypnosis sessions included were carefully conducted by professional psychiatrists and psychologists. Especially noteworthy is the work performed by Dr. Aphrodite Clamar, who also wrote a most appropriate afterword for the book.

Hopkins's individual explorations of abductees' lives before, during and after their UFO encounters represent everything that 1980's shallow *Direct Encounters* (by J.M. & A.L. Gansberg, Walker & Co., New York) did not. Further, the author refrains from re-re-counting classic abduction cases, except in instances where he wishes to make valid comparisons between these well-publicized reports and his own original investigations.

Among the more unusual, and romanticized (if one can term anything about customarily terrifying UFO abductions romantic) accounts is one that involves a 38-year-old abductee designated by the fictitious name, Virginia Horton. Ms. Horton recalls both a childhood and a teenage encounter with UFO entities and, particularly, a kindly grandfather-like occupant—perhaps the leader of the group—who imparts tidbits of apparently extraterrestrial knowledge to the then-six-year-old, while asking her questions. At one point, an instrument is placed in Virginia's nostril, breaking through nasal tissue and causing blood to drip on her clothing. Later, when Virginia rejoins her family, the bloody garb is at once noticed; but the child had somehow been made to forget her abduction experience and, until the hypnosis sessions years later, does not realize the blood's origin. During one of her incidents with the entity, she states under hypnosis: "He kept talking about diversity, which was something he was very interested in. Diversity. About how important biological diversity is." One could wonder, as the author does, whether blood samples and other physical examination procedures described by UFO abductees have something to do with extraterrestrial interest in life-forms scattered throughout the universe.

To *Missing's* credit, the book is *not* a blanket advertisement for hypnosis as a way of getting absolute truth. The author warns that the reader "must carefully separate 'objective' memory from after-the-fact interpretation." At best, hypnosis helps abductees recall what they believed happened. Yet, when we note the variety of similarities among cases described, it is evident that hypnosis remains an important research tool.

Hopkins writes about his work in a clear and interesting style, avoiding stuffy constructions, and he makes some good points about what he has learned during five years of UFO investigations: "It was once generally thought that, if a person reporting a UFO encounter had a prior interest in the subject, that person's report should be automatically discounted. . . . Indeed, a particular kind of intense and inward curiosity about the UFO phenomenon might be motivated by a forgotten but real abduction experience."

The investigator attempts to make some sense of the UFO mystery's intensely bizarre nature in a gripping chapter entitled "Speculations Both Grim and Hopeful." Addressing himself to the U.S. government's lack of affirmative public comment on UFOs, Hopkins effectively summarizes, "The government might not know anything more about the UFO phenomenon than you or I—they would simply have better pictures." Especially intriguing is his speculation on repeat abductions involving physical exams: "One inescapable inference to be drawn from this pattern is that a very long-term, in-depth study is being made of a relatively large sample of humans, and that this study may involve mechanical implants of some sort."

The author wisely makes use of the opinions of famous scientists when stressing the various points he sets forth: "Dr. Robert Jastrow once said something to the effect that any extraterrestrials who have the technology to travel from their planet to Earth must be vastly ahead of us scientifically and intellectually; their behavior, then, would be somewhat incomprehensible . . . if we understand everything (UFO occupants) are doing, then 'they' are probably not extraterrestrial in origin."

Whatever prejudices readers may have about UFO abductions, it remains obvious that our best evidence is the testimony of the UFO abductee. Witness Steven Kilburn, about whom much has been written, apparently developed good insight into his problem of being unable to remember (or was made to forget?) his abduction until he underwent hypnosis. "What frightens me," he cautions, "and what *really* frightens me is that because I didn't remember this before I underwent hypnosis, and now remember it, this could have happened . . . to a lot of people. And I don't mean ten or twenty, I mean thousands . . ."

"If anything happened to me," Kilburn tells an NBC-TV reporter during production of a documentary, "it could happen to you—let me put it that way."

The Medusa Cell

(Continued from page 172)

fever to gonorrhoea and Hansen's disease (leprosy). Low count of eosinophils can be the result of hard labor, adrenal hyperactivity or even result from electric-shock treatment.

It has been over a year now since Dr. Hanker spied the Medusa cells after employing a new staining technique. The researchers at the Cancer Center at Duke and the microbiologists of UNC are still probing the mysteries of the eosinophils in general, with special attention to the Medusa cell. Whether or not the multi-footed monster is a blessing or a curse should be decided soon.

SOURCES

Platt, W. R. *Color Atlas and Textbook of Hematology*. Philadelphia, J. B. Lippincott, 1979. (General information on eosinophils.)

"UNC-CH Researcher Discovers Previously Unknown Blood Cell!" by David Williamson, UNC News Bureau release, November 24, 1980.

Hanker, Jacob; Laszlo, John, et. al. "A Rapid Report . . ." *Histochemical Journal*, November, 1980. (Very technical, but has a page full of color photos of Medusa cells in action.)



Deep-Sky Earthquake Predicting

(Continued from page 179)

with a sextile (60°) to a node the same time the Sun was square to the nodes.

The last and most recent Richter +8 woke up the folks in Ecuador in the wee hours of August 18, 1980. Pluto was 60° from the nodes, Mars was sextile a solar eclipse, and Uranus was also squaring the nodes.

We have run out of five-star monster earthquakes, so now it's time for questions.

If big quakes happen only when certain planets make a definite geometrical aspect to the place of a recent total, annular or partial solar eclipse, why and how does an eclipse that happened recently—months earlier—exist in order to be aspected? Is there a slower form of time in celestial realms? Or does time not exist at all in the lofty places where suns and planets play? Does the eclipse weaken our gravity field? And what about nodes; why do these so-called theoretical points figure so strongly in earthquakes of note?

Volcano enthusiasts will be pleased to hear that Krakatoa blew (August 27, 1883) when Uranus was 45° to the nodes, when Mars was squaring two solar eclipses at the same time. Mount St. Helens went sky-high on May 18, 1980, when Uranus and the Sun were in precise square to both the nodes and a recent solar eclipse. Mars was opposite the total solar eclipse-point of February 1979—whose umbral shadow fell on St. Helens. And having the shadow of a total eclipse fall on you is no laughing matter among astrologers, as myriad disaster charts will testify. Earthquakes and volcanoes are closely related, and it comes as no surprise that eruption charts of volcanoes have the same star-stuff as whopper earthquakes.

Do solar eclipses poke holes or over-stress the Earth's gravity field, allowing tectonic plates to be centrifugally flung out, resulting in an earthquake? Do transiting Mars and Pluto add insult to injury by making illicit angles to those already weakened celestial longitudes?

Before dismissing these questions and my data as blithering idiocy, the soothsayers of science should take time out to think a bit. Nobody knows what causes earthquakes. Pardon that absence of wisdom with our general lack of knowledge regarding gravity, light and time, and it is clear we are still in an early learning stage and should not dismiss hard data out of hand.

But before you readers out there in SITU-land congratulate yourselves for having the common sense not to live on an active fault-line as does the author, let me tell you about the Great Crack in the Earth's crust that runs from Washington state all the way across the vast prairieland of mid-America to the foothills of Appalachia—some 1700 miles.

Geophysicists discovered this thing while leafing through a pile of satellite photos. The "crack" is so big and so wide it is likely many of *Pursuit's* readers live near it, or are in position to feel it when it wakes up, as it did back in 1811 in New Madrid. If you'd like to learn more about this 90-mile-wide crack, refer to the front page of the *Los Angeles Times* of December 17, 1981, or wait for the fault-line to jiggle. When it happens, I'll bet Pluto or Uranus will be square to the lunar nodes, and Mars will be 90° away, molesting the etheric remnant of some recent solar eclipse.



Symposium

(Continued from page 148)

a time is so slow that we didn't reach the proper depth, so we didn't find a continuing trail. A digging crew from the University of Utah butchered the site. I could have done a better job with dynamite. Fortunately, they too failed to dig deep enough to reach the proper layer. Because so many people knew the location, and I had no resources for proper excavation, we photographed the proper layer, then carefully buried it under rubble to protect it from casual digging. Anyone willing to conduct *proper* excavation will be taken to the site on request.

To find in a mid-Cambrian trilobite bed the print of a shoe apparently worn by a human is something that scares the hell out of almost every shade of opinion. It scares the evolutionists because, at the time, trilobites were supposed to be the highest life form on Earth. It scares the churches equally, because Adam was supposedly the first man but the last thing created by God before the sabbath. But the damned thing is still there—and that which is . . . *is!* Of course, those of us who believe that all life was brought here from other planets have no difficulty with it. This is just the footprint of someone checking up on the trilobites to see how they are doing!

Von Daniken put this in one of his books, but true-to-form, he got all the facts mixed up. Too bad that guys like him have to make such fools of themselves. It gives a bad name to those of us who are more interested in finding facts than in selling books.

Enough for now. If there is anyone out there who may be interested in anything mentioned above, have them contact me and let's see how far we can take the research.

—Evan Hansen

FRED MALLERY PACKARD

One of SITU's earliest members, Fred M. Packard, suffered a heart attack at age 68 and died at his home in Fairfax, Virginia, December 5, 1981.

Often described by newswriters as a "parks specialist," Mr. Packard was a working environmentalist long before that word got into the political vocabulary. After graduating from Harvard in 1936 with a degree in biology, he became a park ranger at Rocky Mountain National Park in Colorado. He received his master's degree in zoology from the University of Colorado in 1941. He served in the Navy in World War II, and afterward as executive secretary of the National Parks Association until 1958, when he became the first executive director of the Fairfax County Park Authority. In 1962 he joined the Bureau of Land Management of the U.S. Interior Department. After two years he returned to the National Park Service as an international specialist. He advised governments around the world, including those of Japan, Kenya, Tanzania and Uganda, on park administration and wildlife protection.

After retiring in 1968 he continued his park work through the International Union for the Conservation of Nature and Natural Resources. Recently he was called upon to counsel governments in Latin America on parks.

Fred Packard is survived by his wife, Jean, former chairman of the Fairfax County Board of Supervisors, and by their daughter, Jean. We share their sorrow for having lost a colleague who gave so much of himself to help make the Unexplained world more apparent, and thus more explicable, to all whose lives touched his.

—The editors

SITUations

In this section mostly contemporary curious and unexplained events are reported. Members are urged to send in newspaper clippings 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 the article appeared, and your first initial and last name (or membership number only if you prefer to be credited in that way.)

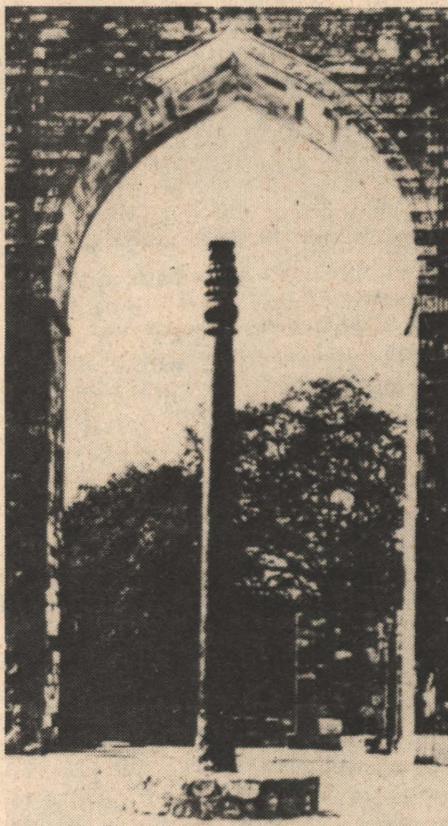
In India's Rustless Pillar There's a Hint of Damascus Steel

One of the most-publicized wonders of the Fortean world, this 23-foot-high pillar in Delhi, India, has probably set some kind of record for having its picture taken. The shaft is not especially beautiful and it isn't notably large. It's old, but not nearly as ancient as lots of other monuments around the world that hark back to civilization's cradle days.

What reason, then, for all the attention paid to the Delhi Pillar?

The shaft was forged from wrought-iron some 1600 years ago, and the part that sticks up above the ground *has never rusted*. "Something" has made its surface uniquely resistant to the oxidation (rusting) that begins as soon as orange spots appear on any ordinary piece of wrought-iron to signal the presence of moisture. Everybody knows about the unhappy result of prolonged oxidation of iron and most steels (don't look now, but underneath your car . . .). But nobody knows for sure why the Rustless Pillar of Delhi has stayed rustless.

There have been guesses, of course. The sages of SITU printed the photo at right along with a page-length commentary in the October 1971 issue of *Pursuit* (Vol. 4, No. 4). Noting that the Delhi Rustless Pillar had been "reported on almost ad nauseam by British military and political personnel during the 18th and early 19th centuries . . ." the editors went on to extract some 20th-century pronouncements from an article published under the title "Superstitious Myths Help to Stop Iron Rusting" in the British *New Scientist and Science Journal* issue dated June 10, 1971. G. Wranlen, a scientist affiliated with the Royal Institute of Technology, Stockholm, had written a lengthy report on the Pillar, and the *New Scientist* article was a paraphrase; what it suggested evidently caused tongues to wag at *Pursuit* headquarters, but only into editorial cheeks. The rustless condition of the Pillar, according to the paraphrase, could be due to the "clean and dry air" of (Old) Delhi; or the composition of the iron was such as to "encourage a protective oxide layer to form on the metal." What's more, the article noted, the Pillar imparts a traditional blessing which is available only to those visitors who contact it in a special way, as do the tourists in Ireland who risk severe lumbar injury for the sake of planting a solid kiss on the face of the Blarney Stone. Invoking the powers of the Delhi Pillar was simpler and free of risk; all one had to do was back up against the shaft and try to clasp hands behind it. And indeed, such rubbing and buffing by thousands of backs and arms and



The Rustless Pillar at Delhi

shoulders for so many years had deposited on the iron an "oxide" that, according to the paraphrase, was just the thing to keep the column rust-resistant forever.

At this point our editorial predecessors became exasperated. "Oxide" could be *ferric* oxide, they growled, and that is the science-textbook name for plain, everyday rust. Moreover, several generations of 15-foot-tall suppliants would have been required to spread a coating over anything that projected that far above the ground. With more than a shade of suspicion, the editors conceded that "Wranlen may be correct. . . . We would still like to know more about it and will report further when Wranlen's (original) paper becomes available."

* * *

The further report was not long forthcoming. *Pursuit* for April 1972 (Vol. 5, No. 2) contained a page of excerpted data from the Wranlen paper. His credibility was now restored, at least in part. What Wranlen really

said was: ". . . that part of the Pillar which is below ground is covered by a rust layer more than 1 cm thick, with corrosion pits up to 10 cm (4 in.) deep." His conclusion: climate, rather than the composition of the iron, is the primary cause of the good preservation of the Pillar aboveground.

The "oxide film," described somewhat derisively in the 1971 *Pursuit* piece, also fared better in the 1972 follow-up: "Immediately above the surrounding platform," Wranlen explained, "the surface of the pillar is very rough, apparently due to defects in the forge-welding, which seems to have been made worse by corrosion, resulting in deep pits. A band of the circumference of the Pillar at a height between 1 and 1.5 meters above the stone platform is very bright, as if polished. The latter is due to the custom of visitors to stand with their backs toward the pillar, trying to clasp their hands around it 'for luck.'

"The whole Pillar is covered by an oxide film of metallic lustre but varying colour (black-blue-brown). According to magnetic measurements, the oxide film on the bright, polished section is less than 50 millimicrons, and higher-up, thinner again. It should also be noticed that if the oxide film is scraped off on some spot, the exposed iron starts to rust as usual. After a week or so a normal rust-spot is observed which, however, is gradually converted to a darker oxide. After a few years the newly formed oxide cannot be distinguished from the main oxide of the Pillar. This shows that the good state of preservation of the Pillar is due to a protective film of corrosion products, formed also in present-day Delhi climate, and not to some inherent slag or oxide coating or some surface treatment carried out during the early history of the Pillar, as has occasionally been suggested. Such a coating would certainly have been damaged and made ineffective, at least locally, in the course of the ages."

The Wranlen quotation was followed by a summary compiled by J. C. Hudson that established a "rusting rate" of 1 for carbon steel exposed to the hot, dry, rural climate of Khartoum, Egypt, and put the comparable rusting rate for Frodingham, England, at 100.

"The upshot of all this is that one should not become too excited about the non-rusting Pillar at Delhi," the editors suggested, still appearing a bit sheepish for having believed too much in a bad paraphrase because it was published in a journal they respected. "However," they continued, "some other interesting points have cropped up 'en route.' Wranlen

Midget Pyramid in Thailand



During a tour of military duty in southeast Asia, SITU member Terry Colvin took this photograph of a pyramid he found in a temple complex in southern Thailand. That was in 1973. Since then he has been stationed variously in Naples, Italy, at Fort Huachuca, Arizona, and now at Fort Clayton, Republic of Panama, where he stopped long enough to be able to answer our request for all available information about this aging structure in an unexpected place. His letter:

I snapped a shot of this small pyramid while climbing a trail to a Buddhist site of worship. Perhaps a temple and/or monastery? I estimate the height as 20 feet plus or minus 5 feet. My wife estimates the age at between 100 and 300 years, because of the similar-type construction in this area about the time of the Burmese-Thai wars. The last in the series ended with the sacking and burning of the old capital at Ayutthaya (spelled variously) in 1767. An interim capital was begun at Thonburi, which did cross the Chao Phya River toward the village of Bangkok (Krung Tep . . . City of Angels, etc.).

Many documents and records were destroyed in Ayutthaya, which makes any reconstruction of Thai history a patchwork effort. You must excuse my straying a bit. I've read a few books on Thai/Siam history, especially up to 1937, the year when the military dictatorship began and absolute monarchy ended.

The pyramid is located in southeastern Thailand near the city of Chanthaburi. It is close to the Kamphucean-Thailand border and shows the influence of the much older Khmer and Mon civilizations.

—Terry W. Colvin



(the paraphraser even misspelled his name) points out that very old iron, deriving from Antiquity or the Middle Ages, in some cases has obviously rusted much less quickly than the best of modern steel but that this is, in fact, a case of 'survival of the fittest' . . .

"Perhaps even more interesting is information received from Ralph Izzard who spent some time in India and often visited the Pillar at Delhi—it was a favorite picnic spot." Mr. Izzard, mindful of an inscription on the Pillar that suggests it was fabricated not in Delhi but in Bihar and moved to Delhi in 1052, had this to say (in 1972):

. . . The whole of southern Bihar is one vast forest peopled by bow and arrowed aboriginal tribes. In 1963 I spent some months happily with them, filming and hunting. The tragedy is that beneath the forest is one solid mass of iron ore. Thus, at Jamshedpur, on the forest fringe, stands the colossal Tata Iron and Steel Works. . . . Research scientists at Tata's have done much work concerning the

Rustless Pillar. . . . As I recall [their reports] definitely state that the Pillar was made in Bihar and as proof of the fact it is pointed out that in some parts the aboriginals made not only their own iron but also their own steel out of clay forges. Steelmaking has died out in Bihar but it still definitely continues in Orissa, the wilder province to the south, where I have actually seen it being done by aboriginals in the clay forges in the depths of the forests. The Tata boys know all about this, too.

"Benighted natives indeed!" was the sign-off comment that followed Mr. Izzard's letter as the editors ended their effort to explain why the Delhi Pillar was able to survive 16 centuries of exposure to weather without much of it rusting. Left unanswered were a couple of questions raised by implication in the last lines of the letter:

(1) Just how much did India's earlier aboriginals know about making iron and steel?

(2) If theirs was indeed an "advanced"

technology, could it not have included a component of rust-resistance, even 1600 years ago?

In the course of experiments at Stanford University during the late 1970s it was determined that ultrahigh carbon steels could be made both superformable (i.e. superplastic) at warm temperatures and strong and ductile at room temperatures. After a time, the experimenters began to note the similarity of their steel to the legendary Damascus "weapons steel" which as long ago as the time of Alexander the Great (c. 323 B.C.) had been the favored metal for sword and dagger blades so sharp that they could "cut a gauze handkerchief in half in mid-air."

What is the connection between Damascus steel, produced for centuries by a supposedly "secret" process, and the possibly rust-resistant steel that aboriginals may have produced in India 1600 years ago? A provocative clue looms up from the pages of any text on the history of metallurgy. Says one: "Damascus steels or Damascus blades are so called not because Damascus was their place of origin, but because Europeans first encountered them in Damascus. The steel was made in India . . ."

Now for the report of the Stanford experimenters, Drs. Jeffrey Wadsworth and Oleg D. Sherby. It reveals that ancestors of the "benighted natives" of India had a technology of steel-making so advanced that modern science has come abreast of it only in this decade. A summary of the Wadsworth-Sherby report will be published in our next issue.

—The (1982) editors



Victim's Dream Nabs Killer

Rafael Gonzalez, 54, owned a fish and poultry market in Miami. Six days before he was fatally shot in a December 1981 holdup, he told his employees that he'd had a dream in which he saw himself killed during a robbery by Roberto Alvarez, a former worker in the store. The dream helped investigators find his killer. Said Sergeant Richard Napoli of the Miami police, "It's spooky, but I'll take help from anywhere, anytime."

Gonzalez' body was discovered when a customer noticed blood seeping out from under a locked door and called police. Gonzales had been shot in the face, head and arm, and \$100 to \$300 was missing from a metal cash-box.

One of the store employees told detectives about Gonzalez' dream and how it had pictured Alvarez as the killer. Alvarez was interviewed at home and agreed to go to the police station to be fingerprinted and photographed. Within hours, crime laboratory technicians matched his prints with those found on the metal cash-box. They also found a witness who identified Alvarez from the police photo as the man he saw leave the market about the time of the murder.

Alvarez, confronted with the evidence, made a full confession and was charged with first-degree murder and armed robbery.

SOURCE: UPI dispatch in *The New York Times* and *The Cleveland Press*, 12/26/81. CREDIT: D. Whitcomb; W. Cermak.



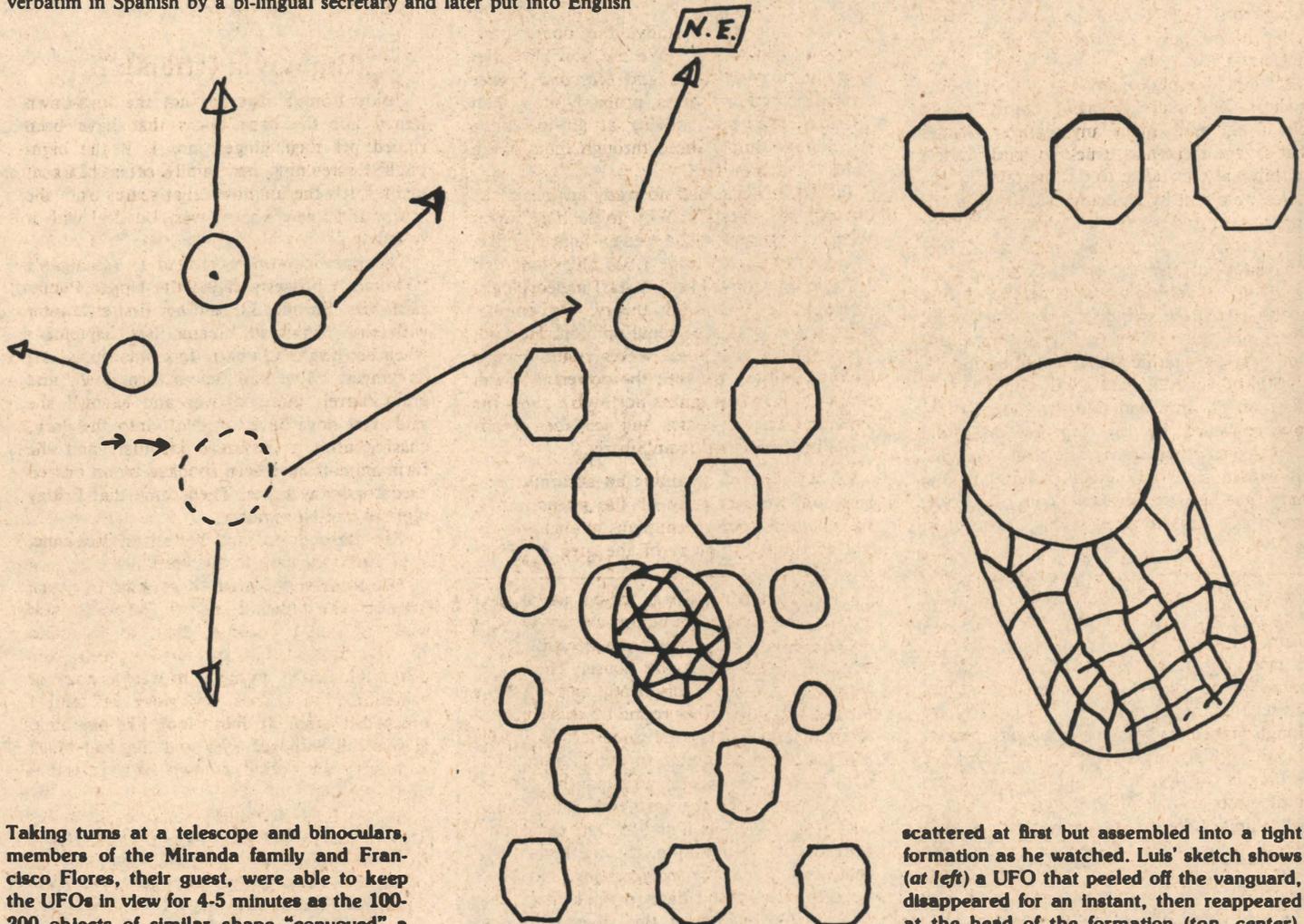
UFOs in Formation Sighted Over Guadalajara, Mexico, in April 1980

The following report is an unusual example of witness-concurrence. Six members of one family and a guest viewed the phenomenon through binoculars and a telescope, and agreed on most details of what they saw. Visited four months later by Helen Dunn, the father and son recorded their oral testimony at her request. The son made the freehand sketches.

At SITU headquarters the taped testimony, in Spanish, was written verbatim in Spanish by a bi-lingual secretary and later put into English

by a translator who verified the transcript by listening to the tape while translating. The sketches are close tracings of the rough, ball-pen originals, reduced about one-fourth but not otherwise altered.

Guadalajara, where the sighting occurred, is located in south-central Mexico and is its third-largest city with a reported population of more than 1.8 million. (See map, page 157.)



Taking turns at a telescope and binoculars, members of the Miranda family and Francisco Flores, their guest, were able to keep the UFOs in view for 4-5 minutes as the 100-200 objects of similar shape "convoyed" a single, larger, drum-shaped craft northeastward above the Miranda home on a sunny, cloudless afternoon in April 1980. The flight was detected by 21-year-old Luis, eldest of

the Miranda sons; he had been probing the sky with his telescope, trying to spot Jupiter. The UFOs that interrupted his search were

scattered at first but assembled into a tight formation as he watched. Luis' sketch shows (at left) a UFO that peeled off the vanguard, disappeared for an instant, then reappeared at the head of the formation (top, center). The drum-like "main UFO" reflected black, orange, yellow, gray and silver tints; all of the "escort craft" were of a silvery color, suggestive of aluminum or similar material.

[HELEN DUNN] On a lovely day in late July I was visiting with the Miranda family who have a home in Guadalajara. Sr. Mario Miranda is a reputable businessman in Guadalajara. We got into a conversation about UFOs and they told me about a sighting of UFOs over Guadalajara that was so fantastic that I thought I'd like to have it on tape to take back with me to the U.S. for interested parties, and so, first I will introduce Mario's 20-year-old son, Luis, a student who was the first to see the sighting above his home on an April day in 1980—and he will tell you, in Spanish, what he saw.

[LUIS MIRANDA] That day, I was looking in the sky for the planet Jupiter. It was around five in the afternoon. I saw something like a star, but of a different color and shape. I

asked my brother for a pair of binoculars. He brought them to me and I pointed them toward the object and I saw that it wasn't Jupiter. It looked round and shone like a small sun but with a light green and blue. After I focused the telescope I noticed that three other objects were coming fast. They joined the first object and stood there awhile, then one headed north, and the other went in a different direction. Then I went and spoke to my father who was entertaining a guest. They wouldn't pay attention to me, but I kept insisting for him to come and look. Then he saw it, and my brother and everybody else saw the ship that came back, came back with a lot more objects. They were a lot—more than a hundred—and they were coming in a big formation. The big one in the middle had an orange color, shaped like a triangle, strange but pretty. They were

a lot, and headed toward the northeast. They were there for five to ten minutes, at around 4:30.

[LUIS'S FATHER] My name is Mario Miranda. I am the head of a family consisting of seven children, my wife, and myself. We live in the city of Guadalajara, Jalisco, which is the second capital of Mexico. On this day we had visiting us a Mr. Francisco Flores, the son of our very good friends Jose Flores and his wife, Maria. They were not here—only their son, who works for the Mexican airline in Los Angeles, California.

While we were sitting in the living room, my son Luis, 20 years old, came in, very excited, and asked us to go outside and look through his telescope at something that was very interesting. I told him to wait, but he said,

Perils of the Demon Sea

There is a wedge-shaped stretch of Pacific Ocean about 100 miles off Japan's east coast which sailors call the Demon Sea—with good reason. Ten large ships have vanished from the area during the last two years, all without a trace. Then, in March 1981, the 40,000-ton freighter *Marcona Trader* just barely made passage into the port of Tokyo with a 33-foot section of her bows missing, after cruising in the Demon Sea.

Her hull was photographed from dockside, to show the foredeck hanging limply over a hole so big as to make any seafarer wonder what savage force had struck so hard yet left the ship and crew alive to tell the tale. As the photos were sent by wire and satellite to maritime interests and media throughout the world, an epidemic of speculation broke out. What could have cut away so much prow from so big a ship? "Collision with a derelict during conditions of low visibility," was one guess. Others said, quite seriously, "Only a huge, unknown type of marine animal could have done it." Still others even went along with what the sailors on the ship had told the board of inquiry convened by the Japanese Maritime Safety Agency: evil spirits had cast their spell and caused not only great damage to the *Trader* but also the disappearance of the ten ships which had vanished without a trace in the Demon Sea.

"Please come now, because there are a lot of flying saucers." When he said this, my visitor became interested and we went immediately to the back yard. It was around 4:30 in the afternoon—4:30 to 5:00—I can't pinpoint the time.

Instead of the telescope, I preferred to look through binoculars which are not very powerful, but with the naked eye you couldn't see anything in the sky. With the binoculars I saw some objects arranged in the shape of a rhomboid, shining like polished aluminum. It was interesting that when I looked, they were like six deep, like in a big parade-formation, very impressive. From my rough count I would say there were about 200—100 in the front and 100 in the back—and in between was a ship shaped like an African drum. I could see its sides clearly because the sky was very clear. You could see the rhomboids' orange, blacks, and silver, in very harmonious combinations, all in perfect formation, not changing course at all. I gave the binoculars to my guest. He looked, and he said, "... and people still say they don't exist!"

We all decided not to tell anybody about them because we thought that if we told anybody, they'd think we were crazy.

This formation went off like a big parade towards the northeast from Guadalajara. I couldn't tell who they were, where they came from, or what they were looking for. With these questions in our minds, we were left very impressed.

My son, Luis, always wants to be watching the sky. He loves astronomy, even though he is only twenty years old, and he's forever trying to find flying objects in the sky—or stars—and he tries to look at the sun with filters on his telescope. It's not a great piece of equipment but it does the job.

The maritime agency hired scientists to make a careful examination of the *Trader's* hull, inside and outside. Agency officials listened again and again to the taped testimony of the captain as he told how crewmen had discovered a hairline crack in the bows only seconds before the huge section of reinforced steel was carried away "like a piece of tissue paper."

After months of study, the board published its conclusion: "We are now sure that those ships were sunk, and *Marcona Trader* damaged, by huge waves, probably more than 100 feet high and moving at an incredible speed, that simply sliced through them like a knife through butter."

But the officials had no ready answer to the obvious next question: Why do the huge waves seem to form only in a wedge-shaped section of ocean estimated to be 1,600 miles long and 1,000 miles wide at base? A staff meteorologist advanced an interesting theory, but emphasized it was only a personal opinion. He said, "It could be that these waves result from a sudden collision between the powerful, warm Black Current that snakes northward along the Japanese Pacific coast, and ice-laden winds whipping southward from Siberia."

In the hope of obtaining an accurate database for further study of the phenomenon, the Japanese government plans to anchor a 40-ton robot in the heart of the area by 1983.

That afternoon, he was telling me, he was looking for a star when he says he saw a round object—an object I didn't see because I was with my guest inside the house. The object stopped right above his head, and while he was looking, two other round objects came into sight, and quickly the three left as if they had just finished talking to one another. One went north, the second went south, and the third went toward the northeast. But the first one, that looked as if it had left, came back with the entire formation, the one I saw. I repeat, and I may be exaggerating, but there were so many that I dare to think there were at least 200 objects of this silver color and rectangular shape.

This was the greatest experience we ever had. However, I think not too many people would have noticed what we saw. At that time of the afternoon nobody really looks up at the sky because of the brightness of the sun. Even if they did, nothing would be visible to the naked eye.

That is all I have to say at this time. I want to make it clear that the house we live in, in Guadalajara, has an area of 1600 square meters and a back yard with an area of 500 square meters that gives plenty of room for observations. In this observation, all of my children participated. I think it is also important to point out that my home is located in a central part of the city, only six blocks from the Sheraton Hotel. Which leads me to think that other people may have seen what we did, but just like us, are keeping it to themselves.

SOURCE: Witnesses' direct voice-transcription translated from Spanish by Mauricio Rivadeneira. CREDIT: Helen Dunn.



And a 6,000-ton helicopter-carrying rescue ship of specially reinforced construction is being built to be placed on patrol, the better to assure the survival of sailors who brave the Demon Sea.

SOURCE: Tokyo dispatch in *Sunday Express* (London), 12/13/81. CREDIT: D. Mace.



Bigfoot in 'Thumb'?

Cindy Barone says it's not the torn-down fences nor the barn doors that have been ripped off their hinges, nor is it the high-pitched screaming her family often hears at night. "It's the unknown that scares us," she said. "If I knew what it was, I'd deal with it somehow."

The Barone farm is located in Michigan's "Thumb," properly called the Upper Peninsula. Mrs. Barone, 33, said her first encounter with the "unknown" came last September when her neighbor's barn door was ripped off its hinges. "I've had fences torn down and grain barrels dumped over and eaten," she said. Her dogs have raced off into the dark, chasing after a presumed intruder, and the farm animals have been spooked by an unseen predator many times. Then came that Friday night in mid-November:

Tina Barone, 13, and her sister, Roxanne, 12, went to the barn to do chores.

"Roxanne was scared to go into the barn because she'd heard noises before," said Tina. "I said I would go first, so I reached for the light. I felt fur. It felt thick and dirty. At first I thought it was a goat or something, so I took my glove off and I touched it again. It didn't look like anything. It was tall with red eyes and big and black and furry and stood on two legs. It had a deep growl."

After telling Roxanne to run back to the house, Tina turned and began to walk slowly from the barn, but "it started walking out behind me and I started running." The creature never tried to harm her, Tina said.

The girls' cousin, David, 18, got his shotgun. "It was some kind of animal," said David, "but I can't describe what. It was about 6 feet 6, or 7 feet 6. I didn't shoot to kill. I just shot in the air to scare it away. It was standing on two feet and had real long arms—between a bear and an ape, that's what I think. I've never seen a Bigfoot, so I have no idea if it was one of those."

Mrs. Barone said the family is frustrated by the unwillingness of many people, including the local sheriff, to take her story seriously. A spokeswoman in the sheriff's office suggested that what Tina felt was a raccoon or similar small friendly animal. But Tina, who is sure "it" was no ordinary barnyard animal, says that from now on she will carry a camera when doing barn chores, "in case I see him again, because no one believes us."

SOURCE: *The Detroit News*, 11/22/81; UPI dispatch in the *Chicago Tribune*, 11/23/81. CREDIT: W. Kingsley; S. Guadagnoli; N. Paulsen.



Letters

Astrology v. Astronomy = Wilson v. Velikovsky?

The review of Edgar Wilson's book, *MEVS: Creator of the Pyramids* (*Pursuit* No. 54, p. 87), is quite revealing. Since Wilson believes the Giza Pyramids were built under the direction of extraterrestrials, he was quite deceptive in omitting this information from his article on the stability of the solar system in the Fall 1980 issue (*Pursuit* No. 52, p. 151). In describing Wilson's background in the review, accuracy would have been better served had he also been identified as an astrologer.

The plethora of astronomical relationships that Wilson identifies in the Giza Pyramid complex is quite impressive. However, without any evidence that the relationships were intended, their existence by sheer coincidence and subsequent selection by a determined number-cruncher cannot be excluded. Independent evidence that Earth has been visited by alien beings is far from persuasive. In the April 1981 *Physics Today*, Frank J. Tipler argues convincingly that we are alone in the galaxy.

The possibility that Wilson's work is merely a numerological exercise gains credence from the following considerations:

1) The ability to measure the speed of light accurately implies a high degree of technological competence which is inconsistent with the discrepancies that Wilson has to explain away. For example, his model predicts a radius for Venus of 6105 km compared with the measured 6056 km. The 49 km difference is ascribed to the cloud height, which today is 65 km. The 16 km difference, explainable by a warming and expansion of Venus's atmosphere, is not consistent with the stability Wilson seeks to prove.

2) Considering the pivotal importance played by the well in the Temple of Chephren, it is a strange omission that Wilson never, in his article or book, shows its precise location. The location of the well indicated on his diagrams does not coincide with the location shown in M. A. Murray's *Egyptian Temples*. The location indicated by Wilson is close, but east and south of the true location. A good extra-terrestrial surveyor should be better.

3) Wilson is ambiguous regarding how planetary velocities are represented in the Giza model. The distance from the well to the center of a pyramid when referring to a map implies a horizontal distance. Yet, page 37 of his book shows the distance to be from the pyramid's apex to the well. Nowhere does Wilson indicate that the floor of the Temple of Chephren is about 40 meters below the base of the Great Pyramid. If he thinks the difference between the leg and the hypotenuse is negligible, he is mistaken. For the Great Pyramid, the difference is 26 m, or 4% compared with the horizontal 640 m distance.

4) In his book, Wilson explains an 8/10% discrepancy for the escape velocity from the Moon as the increment needed to escape the Earth's gravity at the lunar orbit. This handwaving reveals his poor grasp of elementary astronomy. With the escape velocity from the Moon being 1.475 mi/sec and the escape velocity from the Earth at the lunar orbit being 0.895 mi/sec, the escape velocity from the Earth-Moon system is simply

$$(1.475^2 + 0.895^2)^{1/2},$$

or 1.725 mi/sec which is 17% higher than the lunar escape

velocity. Wilson's concern about an 8/10% discrepancy was quite misdirected.

Wilson's attempt to show that the Giza Pyramids encode detailed astronomical data, though ambitious, is not as accurate as he needs to make his case. It is flawed by his incomplete grasp of the necessary physical relationships and inept explanations of the discrepancies he acknowledges. It is insulting to a great scholar, as Velikovsky was, to present Wilson's pyramidology as a self-proclaimed refutation.

—C. Leroy Ellenberger

Senior Editor and Executive Secretary

KRONOS

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* * *

'Perceptual Effects'—Continued

I am the E.C. in the Macer-Story article on "Some Perceptual Effects of UFO Contact," (*Pursuit* No. 55, Third Quarter 1981), and I object to the non-use of my name and the use of my initials only. My reasons are not for my own glorification, but for more important reasons.

There has been so much fraud and deception surrounding UFO phenomena, and so much changing of names to "protect the innocent," that it has left the subject of UFOs under a dark cloud of suspicion. Most people mistrust most articles, myself included, and using initials or changing names gives one the feeling that the person may be afraid of being exposed as a fraud. Anonymity has been a product of the 1950s and 1960s, as well as with the national tabloids. It should remain a "has been."

Someone has to start taking a more rounded and responsible approach toward the people doing continued research of the objects themselves, not of other people's reports. Only then will readers be more confident that what they read is true and not just wild fantasy.

In my case, I had already been nationally written about by Harry Lebelson, in the September 1981 issue of *Omni* magazine's "UFO Update," (under the title) "A Pine Bush Adventure." Dates of release of articles are sometimes difficult to predict, but there was enough of a time difference between the release of *Omni's* article, and my full name, with the *Pursuit* issue.

In regard to the Wanaque photographs, I think it might have been more meaningful if it had been clarified that I had previously taken an extensive number of photographs of metallic objects while doing a scientific field study in 1980, in Pine Bush, New York, with Harry Lebelson, over a four-month period of time.

When we shot the first set of Wanaque photographs, two of which you published, although we were focused on an object over ice, I always had my doubts as to what the actual photographs represented. The house light and road traffic seemed suspicious in the pictures, though not in our actual viewing of the object. The "effects" on this set of Wanaque pictures was also totally different from what had appeared in the Pine Bush pictures, and I was not prepared to accept this difference without substantial causes. We were shooting the same objects; why not photograph them the same way?

The succeeding months of photographic study just reinforced my belief that the wobbly lights in the photos were vibrations from camera movement because the edge of the mountains were also fuzzy. This doesn't mean we didn't see the craft, as Harry seems to think, this just means that in these photos, we didn't register the ship on film, probably because we were too far from it, and it was too dimly lit.

A few weeks later, I did take an outstanding color photo of the triangle craft's effects over Wanaque. This photo is no comparison to the other Wanaque photos and the same effects that showed up on the film in Pine Bush, showed up in this one particular photograph. I wish you had published this one picture instead of the others.

If you had mentioned my Pine Bush work as a prelude to Wanaque, the last two italicized paragraphs would not have been written as such.

Pine Bush occurred between my California saucers and our brief encounter at Wanaque Reservoir. Harry and I literally saw hundreds of metallic objects in Pine Bush, over more than a four-month period. It has put us in an unparalleled authoritative position to know that what we appear to be watching is what it appears to be—someone else's spaceships. We just happen to disagree on whether UFOs are interspace/parallel time (some people say inter-dimensional), or whether they are interplanetary. (They *are* interplanetary.)

—Ellen B. Crystall

The substitution of initials for names is a long-established policy among publishers of specialized periodicals in many fields of scientific investigation. It is a good policy, we think, because it guards the confidentiality that witnesses expect in return for their testimony (and which many insist upon), yet leaves open the opportunity for the witness to disclose identity at some future time, should he or she wish to do so. Ms. Crystall's initiative in requesting this disclosure is much appreciated. For all 14 years of Pursuit's existence we have tried to take that "responsible approach toward the people doing continued research of the objects themselves" of which her letter speaks. Whether we have succeeded, or to what extent, can best be determined by our readers.—The editors

* * *

The Sound Doctrine of Audial Meaning

There is a significant oversight inherent in T.B. Pawlicki's article, "Sooner or Later You Too May Have ESP," which appeared in the Summer 1980 (No. 51) issue of *Pursuit* (Vol. 13, No. 3, p. 101).

The electromagnetic signals that a radio picks up have, in and of themselves, *no* audial meaning. Audial meaning comes only when these signals are translated into audial signals in and by the radio's speaker and not before that point. At that point electrical signals are converted into mechanical pulsations (i.e., sound waves), and only the latter have audial meaning. The only way you can hear music from a radio is to hear *sound waves* (which constitute the music). If one could "hear" the *radio waves* which ultimately produce the music of a radio, *at best* he would "hear" only an ESP version of "static."

If, on the other hand, Pawlicki is claiming (or *also* claiming) that *via ESP* one can *hear* sound waves (which have *no* electrical or magnetic qualities whatsoever), this contention would represent one of the most extreme and far-fetched notions that has ever visited the field of ESP.

—Neil M. Lorber

How to Take Great Pictures on a Saturday Night

We would like to offer our professional analysis of the alleged high-noon space ship which an "unsophisticated Arab" took a photograph of, published on page 45 of your First Quarter 1981 issue (*Pursuit* No. 53).

What follows is predominantly the opinion of Donald C. Grunzweig, senior darkroom technician of DCG Photographic Laboratory Inc., here at Pompano Beach, Florida.

Briefly, it is technically impossible within the laws of physics (the nature of light) and the chemistry of the art of photography for this picture to have been taken during the daytime as suggested. It was shot at night.

If it had indeed been a flying craft, this photograph would have to have been made by using an extremely expensive, long, sophisticated lens. The subject would have to have been quite a distance away. The proportions of the composition are easily interpreted into fact by a trained eye. Yet, it was stated that this shot was but a mere Polaroid.

Mr. Grunzweig deals in every type of photography from medical to aerial. People come to his custom lab because he specializes in the unusual and the difficult. He is himself creative in artistic photographic expression, and he has on his staff a photographer who creates art images exactly like the one you printed, only his are in color.* His name is Douglas Petersen and he does these abstracts purely for pleasure. He simply waves the camera wildly whilst the shutter is left open, expanding bands of light and causing long trails while he's focused on city street lights, neon signs, and the like.

In the picture you published, as in Petersen's pictures, the light source is immobile; it is the camera which is moving, considerably. Try it and you'll see. There is absolutely no "sophistication" involved. It's a fun thing to do on a Saturday night. It is interesting to learn that someone else has thought to fool around with their camera in the same way and with the same result.

Mr. Grunzweig further notes that if this had been a *space-ship* with such an intense light source as the one seen in the upper left-hand corner, the photographer would have been blinded, were it "near his house." In reality, Mr. Petersen suggests the light might have been a fluorescent bulb.

We think perhaps some "unsophisticated Arab" is pulling Michael Sanders' leg. Or else he is pulling yours. Or both. Or some combination thereof. If we can be of further assistance, please contact us. It was quite by chance that we saw this picture while reading a friend's copy of *Pursuit* for the first time. We enjoyed reading every article and are glad you're around doing a good job. We are interested in helping, utilizing our expertise in an area far more relevant than our daily fare of advertising agency needs (for example, "Put this \$44,000 limousine on another planet and make everything bluer"). If anyone wishes to see copies of Mr. Petersen's light abstractions, we'll provide direct contact with Doug Petersen.

—Frances D. Grunzweig, Director
DCG Photographic Laboratory Inc.
5283 North Dixie Highway
Pompano Beach, FL 33064

*The photograph sent by Mr. Sanders was in fact a color print. To reproduce it in color would have been prohibitively expensive, but good retention of contrast in the various areas was achieved by careful reproduction. As Ms. Grunzweig's letter indicates, the issue here is not color but subject matter, location and time. —Ed.

The Notes of Charles Fort

Deciphered by Carl J. Pabst

ABBREVIATIONS

ab	about	mag storm	magnetic storm
ac to	according to	Me	Maine
A. J. Sci	<i>American Journal of Science</i>	Met	Meteor
(Al)	[?Almanac?]	morn	morning
An de Chimie	<i>Annales de Chimie</i>	MS.	manuscript
Annals of Phil	<i>Annals of Philosophy</i>	NE	Northeast
An Reg	<i>Annual Register</i>	New Monthly Mag.	<i>New Monthly Magazine</i>
An. Sci Disc	<i>Annals of Scientific Discovery</i>	N.M.	No More
Arch. des. Decouv.	<i>Archives des Decouvertes</i>	Nos.	Numbers
B	[?]	N. W. Prov.	Northwest Provinces
BA	<i>Report of the British Association for the Advancement of Science</i>	NY Sun	<i>New York Sun</i>
bet	between	Op Mars	Opposition Mars
Bib. Univ.	<i>Bibliographie Universelle</i>	p.	page
Bull des Sciences	<i>Bulletin des Sciences</i>	(P)	[?]
Conn.	Connecticut	Pa.	Pennsylvania
cor.	correspondent	phe	phenomena
C.R.	<i>Comptes Rendus</i>	Phil Mag	<i>Philosophical Magazine</i>
(Cut)	illustrated	Phil Trans	<i>Philosophical Transactions</i>
D-58	<i>The Book of the Damned</i> , page 58	q	earthquake
det met	detonating meteor	Q. J. Roy Inst	<i>Quarterly Journal of the Royal Institute</i>
Edin J. Sci	<i>Edinburgh Journal of Science</i>	q-phe	quake and phenomena
Edin New Ph. J.	<i>Edinburgh New Philosophical Journal</i>	ref.	reference
E Mech	<i>English Mechanic</i>	Rept B.A.	<i>Report of the British Association for the Advancement of Science</i>
Eng.	England	/// [Reverse side]	probably not related
E to W	East to West	Sc Am.	<i>Scientific American</i>
ext. heat	extreme heat	Sci. Gazette	<i>Scientific Gazette</i> [?]
(F)	<i>Fletcher's List</i>	Smithsonian Inst Rept.	<i>Annual Report of the Smithsonian Institution</i>
Finleys Rept.	<i>Finley's Report</i>	S. Op.	<i>Science Opinion</i> [?]
Fr	France	Spon Comb.	Spontaneous Combustion
frgs	frogs	stat	stationary
ft.	feet	s.w.	southwest
Gents Mag	<i>Gentleman's Magazine</i>	Tasmanian Journal	<i>Tasmanian Journal of Science</i>
h	hours	(th stone)	(thunderstone)
(Hun)	Hungary	th. storm	thunderstorm
Inf conjunction	Inferior conjunction	Trans Bombay Geog Soc	<i>Transactions of the Bombay Geographical Society</i>
Intro to Met	<i>Introduction to Meteorology</i>	Trans Merc.	Transit Mercury
(It)	Italy	Va.	Virginia
Jour Asiatic Soc Bengal	<i>Journal of the Asiatic Society of Bengal</i>	vol.	volume
La Sci Pour Tous	<i>La Science Pour Tous</i>	Volc	Volcano
L'Institut	[?]	Vulcs	Vulcans
Liv Age	<i>Living Age</i>	Wernerian Nat Hist	<i>Transactions of the Wernerian Natural History Society</i>
LT	<i>London Times</i>	Soc Trans	
Mag Nat Hist	<i>Magazine of Natural History</i>	W. Indies	West Indies
mag of moon	magnitude of moon	W to E	West to East
Mag of Sci	<i>Magazine of Science</i>		

1822

Continued from Pursuit No. 55, Vol. 14, No. 3, Third Quarter 1981, page 144.

Oct 16 / from Sir John Herschel's MS. Journal / Sky overcast—great light like moon breaking through (London) / no record of meteor at time. / Rept B.A. 1870-87.

Oct 18 / Water in wells around Vesuvius disappears. / 20th, about 2 p.m., violent eruption. / An Reg '22-213.

Oct 22 / 25[th], ashes ceased. / BA 54.

Oct 20 to 28th / Vesuvius / A. Reg. Oct 22-24 / Vesuvius / Oct 23, great explosion / Q. J. Roy Inst 16-182 /

[Reverse side] L.T., Nov 15-3-d / 18-2-e / 22-2-c.

about Oct 22 / (It) / Sound / Rumbings / Verona / See 1816.

Oct 22 / Vesuvius terrific / A.J.S. 6/385 / Ashes "at first reddish brown, then more white.

Oct 23 / Two "Vulcs" / Pastorff / An. Sci Disc 1860/411.

[BCF, p. 395:

Oct 23, 1822—two unknown dark bodies crossing the sun; observed by Pastorff (*An. Sci. Disc.*, 1860-411.)

Oct 27 / Berleburg / BA 60 / [Fireball].

Oct 28 / "or 22nd?" // Brighton, England / Fireball / BA 60.

Nov. 4 / Trans Merc. / S. Op. 1.

Nov 4 / Chili / Copiapo, Chili,

almost destroyed. / BA '54-142.
 Nov 11 / Freiberg / BA 60 / [Fireball].
 Nov. 12 / Potsdam / Fireball / BA 60.
 Nov. 15 / Apenrade / Fireball / BA 60.
 Nov 19 / q—deluge / 10:30 / Time of shock, the sky was cloudless, moon and stars shining brilliantly. Weather continued clear. Evening of 27th, tremendous rainstorm. / Q. Jour Roy. Inst., 17-45 / Rain had never fallen before in month of November.
 [Reverse side] Shocks continued at least to end of Sept., 1923 [?].
 Nov 19 / (+) / Chili / (+) / q / Writer in Q J Roy Inst 17-38 says that some persons said that they had seen
 [Reverse side] an unusual light in the horizon to the southward, but that he had seen nothing.
 [Second page] This writer was at Concon, 15 miles NE of Valparaiso. He says that at Valdivia, 39° 50' S, [Reverse side] 2 volcanoes burst out suddenly with great noise, illuminating the heavens, and then as suddenly subsided. (This sky phe?) On 27th, tremendous fall of rain in a place where rain had never before fallen.
 Nov 19 / Fireball / 2/3 moon / BA 60.
 Nov. 19 / q-phe / q. / Chile. / A. J. Sci 30-110 / 10:30 p.m. / Dried up wells and brooks renewed. "Meteors or blazing stars and flakes of
 [Reverse side] fire are said to have been seen in heavens; one very vivid meteor shot from the southwest toward the southeast." / Had been many slight shocks in preceding month
 [Second page] at Valparaiso. Then q's every day.
 Nov 19 / (Chili) / Valparaiso / met 2/3 size of moon / burst / train of fire / BA '60-68.
 Nov. 19 / 10:15 p.m. / Great q / Chili / Nov 21-28 / BA '54-144.
 Nov. 22 / Valparaiso / 10 a.m. / 3 loud explosions,
 [Reverse side] after each of which the earth trembled. / other q's / BA 54.
 Nov. 24 / Vesuvius renews with violence. / BA 54.
 Nov 22 / Ves. eruption began, 2 p.m. / violent to 25th / BA '54.
 Nov 25 / 3 and 5 a.m. / Wurtemberg / q and sounds / B As 54/144.
 Nov 26 / Valparaiso / tremendous rainstorm—never before known to occur at this season / BA 54-144.
 Nov. 28 / Aerolite? / See Nov. 29, 1809.
 Nov. 30 / (F) / Metite at Futtehpore / shortly before sunset / Jour Asiatic Soc Bengal 30/130 / [Reverse side] Edin. N. P. J. 53/245.

Dec 1 / Grenada, West Indies / q. / I / [Light / BA 1911].
 Dec 21 / Brunn / Fireball / BA 60.
 Dec. / Eruption of volc Eyafalle / Jokel, Iceland / [Reverse side] Q. J. Roy Inst 16-396.
 Dec 31 / Volc / Api, Java. / N.M. / C.R. 70-878.

1823

/ B / q. / Chile / Le Moniteo, p. 411, 531, 571.
 Jan 10 / Mureia and Alicante, Spain / q. / II / [Medium / BA 1911].
 Jan 11 / Augsburg / Fireball / BA 60.
 Jan 24 / England / Fireball / BA 60.
 Jan. 26 / Gosport / BA '60 / Fireball.
 Feb-March / qs / I / [Light / BA 1911] / Formosa.
 Feb. 16 / 1st snowstorm recorded in Mobile, Alabama / NY Sun, 1892, Jan 21-6-7.
 Feb 24-25 / q and storm / night / Violent storm near Hanover, and [Reverse side] q, and a crevice a foot wide opened in the ground.
 Mar 5 / Italy and Sicily / great q. / [BA] '11.
 March 6 / q and Sounds / Santa Lucia de Milazzo, Sicily / Concussion and 4 terrific crashes supposed be subterranean. / See 1816.
 March 14-15 / 'Calabria, Abruzzo, Tuscany; at Bologna and through the whole chain of the Appenines / Red snow / (P) / Mag of Sci 4-274 / [Reverse side] See March 13, 1813.
 Ap. 2 / Manheim / Fireball BA 60.
 Ap. 6 / Berlin / Fireball / BA 60.
 Ap. 9 / Potsdam / Fireball / BA 60.
 May 2 / Embleton / Fireball / BA 60.
 May 7 / Panama / q. / III / [Heavy / BA 1911].
 May 8 / Wurtemberg / yellow dust / Archives des Decouvertes 1824/223.
 May 13 / Yellow dust called "sulphur" / Crailsheim / Bull. des Sciences 1/1/301.
 May 22 / In Nature, 14/195, T. W. Webb writes that he saw a small luminous body near Venus.
 [BCF, p. 395:

An unknown, shining thing—it was seen, by Webb, May 22, 1823, near the planet Venus (*Nature*, 14-195).

More unknowns, in the year 1823—see *Comptes Rendus*, 49-811 and Webb's *Celestial Objects*, p. 43.] [BCF, p. 400:

Unknown objects have been seen near Venus. There were more than thirty such observations in the eighteenth century, not relating to so many different periods, however.

Our own earliest datum is Webb's observation, of May 22, 1823. I know of only one astronomer who has supposed that these observations could relate to a Venusian satellite, pronouncedly visible sometimes, and then for many years being invisible: something else will have to be thought of. If these observations and others that we shall have, be accepted, they relate to unknown bulks that have, from outer space, gone to Venus, and have been in temporary suspension near the planet, even though the shade of Sir Isaac Newton would curdle at the suggestion. If, acceptably, from outer space, something could go to the planet Venus, one is not especially startled with the idea that something could sail from the planet Venus—visit this earth, conceivably.]

May 30 / Waters of Lake Erie suddenly rose 9 feet. / BA '54.
 June 12 / 8 p.m. / Metite / Angers, France / taken up immediately—"not particularly warm" / [Reverse side] Quar Jour Roy Inst 14-447.
 June 19 / 9:30 p.m. / Tornado / Morgan, Ohio / Finleys Rept.
 June 22-July 18 / Volc / Iceland / C.R. 51-68.
 June 22 / Loud sounds, southern Iceland. On 26th, violent eruption of Kotlugian. Ashes covered ships 90 miles at sea. / [Reverse side] Q. J. Roy Inst 16-396.
 June 26-July 23 / Eruption of Katla, Iceland / [Reverse side] Smithsonian Inst Rept. 1885-510.
 July 23 / Blairgowrie / Water-spout / LT, Aug 8-2-d.
 July 24 and 25 / Two remarkable spots on sun, by Pastorff / (N.M.) / CR 49/811.
 July / In a heavy th. storm, a ball of heavy material—ab. 7 inches in circumference,
 [Reverse side] and weighing 8 ounces—fell at Coddendam, in Suffolk. / New Monthly Mag. 9-383.
 July 30 / Leipzig / Fireball / BA 60.
 Aug 7 / q / Ragusa / See Aug 20.
 Aug 7 / Aerolite / also 1822 / E. Mec 79/383.
 Aug. 7 / See Sept, 1826. / Nobleborough, Maine / Metite / (F) / [Reverse side] or Oct 11?
 Aug 9 / Singen. / N.E. to S.W. / Fireball / BA 60.
 Aug 12 / Tubingen / Fireball / BA 60.
 Aug 19 / Munich / Fireball / BA 60.
 Aug 20 / Ragusa / Fireball / BA 60.
 Aug 20 / q and met / at Ragusa / and q there on 7th / BA 54.
 Aug 20 / Ragusa / Met and q, and sea retired nearly a mile from coast. / and Turkish Bosnia / B.A., '54.

Aug 20 / q phe / dark / at Ragusa / L.T., Oct. 21-2-b / "On the 20th the air became
 [Reverse side] suddenly dark. A fiery meteor appeared over the city, and fell into the sea, followed by an earthquake that overthrew many houses. The sea retired nearly a mile from the shore.
 [Front side] Felt strongly in Turkish Bosnia. There it was reported that a volcano had broken loose.
 Aug 23 / Report 54/153 / That Aug 23, 1823, this time a mass of rock was moved from its place and rolled away, but that on all other occasions no such distinct earthquake phe.
 [Reverse side] 9 occurrences of the sound listed for Oct and Nov, 1824, "unaccompan[ie]d by any shock."
 Aug 25 / Asia Minor / q. / II / [Medium / BA 1911].
 ab. Aug 25 / th stone / Cor sends stone to editor of A J. Sci (7-56), saying that people of Stamford, Conn.,
 [Reverse side] thought it had fallen from a thunder cloud. It was a composition of sulphur in granite. People named hill on which said fallen "Brimstone Hill."
 Aug 26 / At Dreux, France. Whirlwind called waterspout. Blackish vapor and flames in the middle of it. [Reverse side] Hailstones size of fists fell. / A. J. Sci 10/184.
 Aug 29 / LT, 2-c, from Nottingham Review / Spook—bed post / For 5 or 6 weeks in a house in Warsaw. [Reverse side] A sound like quacking of a duck, beginning at 3 p.m. and continuing until morning. When the occupants were in bed, the sound seemed to come from one of the bed posts.
 Sept 9 / See Sept 26. / In Silesia / 1:30 p.m. / Sound like 'thunder / like whirlwind phe / BA 54/153.
 Sept 13 / [London Times], 2-c / Volc in Iceland.
 Sept 16 / Genoa / whirl like Aug 26 / Same ref.
 Oct 3 / Konigsberg / Fireball / BA 60.
 Oct 10 / (?) Letter from M. Flaugergues, to Baron Zach.—tha[t] he had not seen any
 [Reverse side] spots on the sun for the preceding 16 months. / Edin J. Sci 1-371.
 Oct. 10 / 10 h / Venus / Inf conjunction / (A 1).
 Oct. 11 / Aug 7 (?) // Nobleboro / Metite fell among sheep. / A. J. Sci 7-171 / [Reverse side] Analysis / 9/400 // (F) = Aug 7.
 Oct 19 / —16 h / Mercury / Inf conjunction (?) / (A 1).
 (A 1).
 Oct 23 / Sharply defined circular spot, by Biela / Webb, *Celestial Objects*, p. 43.
 Oct 23 / Slight shocks and ext.

heat, at Minschrift, Siberia. / BA 54.

Oct 27 / Polt[er]geist stones / [London Times], 3-b / = Monday—L.T. / A ghost at Pimlico—for 2 weeks reports that a ghost, in various forms, had been seen. Night of 21st, showers of “stones, brickbats and missiles” broke almost every pane of glass at Nos.

[Reverse side] 4, 5, 6, 7 Elizabeth-place, Queen Street. Some of the stones weighed at least seven pounds. Origin could not be discovered. Night of 22nd, *about the same hour*, and 23rd, “same time precisely, more showers, breaking furniture.

[Second page] Said that constables and watchmen were on guard [Reverse side] but that the “diabolical offender” could not be discovered. / So definite story of stones but no definite story of ghost seen.

Nov 17 / China / q / III / [Heavy / BA 1911].

Nov 21 / Freiberg, etc. / loud sound and q / BA 54/153.

Nov 24 / Stockholm and other places in Sweden—“a dull sound that seemed to come down from [Reverse side] the atmosphere—then a violent tempest. Shock not felt in mines.

Nov 26 / Shock / Calcutta / BA 54.

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

Nov 30 / 3:10 p.m. / Martinique / q and sea waves / Heat had been [Reverse side] suffocating. Abundant rain followed q and lasted 10 days. / BA 54.

Nov 30 / Q and great rain at Martinique / C.R. 16-1292 / See Nov 30, '24.

Dec 6 / Aix / Fireball / BA 60.

[BCF, p. 359:

In the *Annals of Philosophy*, 23-29, Col. Beaufoy writes that, upon Dec. 7, 1823, he looked for the emergence of Jupiter's third satellite, at the time set down in the *National Almanac*: for two hours he looked, and did not see the satellite emerge. In *Monthly Notices*, 44-8, an astronomer writes that, upon the night of Oct. 15, 1883, one of the satellites of Jupiter was forty-six minutes late. A paper was read at the meeting of the British Astronomical Association, Feb. 8, 1907, upon a satellite that was twenty minutes late. In *Telescopic Work*, p. 191, W. F. Denning writes that, upon the night of Sept. 12, 1889, he and two other astronomers could not see satellite IV at all. See the *Observatory*, 9-237—satellite IV disappeared 15 minutes before calculated time; about a minute later it re-appeared; disappeared again; re-appeared nine minutes later. For Todd's observations see the *Observatory*, 2-227—six times, between June 9 and July 2, 1878, a satellite was visible

when, according to prediction, it should have been invisible. For some more instances of extreme vagaries of these satellites, see *Monthly Notices*, 43-427, and *Jour. B. A. A.*, 14-27: observations by Noble, Turner, White, Holmes, Freeman, Goodacre, Ellis, and Molesworth. In periodical astronomical publications, there is no more easily findable material for heresy than such observations. We shall have other instances. They abound in the *English Mechanic*, for instance. But, in spite of a host of such observations, Prof. Young (*The Sun*, p. 35) says that the time occupied by light coming from these satellites is doubtful by “only a fraction of a second.” It is of course another instance of the astronomers who know very little of astronomy.]

Dec 13 / Belley (Ain) / Fireball / BA 60.

Dec 13 or 16 / Belley (Ain), France / Shock said by some persons occurred at 1 a.m. At

[Reverse side] 3 a.m., an explosion, and ac to one person, the heavens appeared on fire. / listed with q's / B Assoc 54/154.

Dec. 13 / 3 a.m. / Bellay (Ain) / q, and sky as if on fire / C.R. 17-622.

1824

/ Meleda / See Humboldt. / Cosmos 1-205.

/ Jubilee of Leo XII / Poitiers / Cross 200 ft. high over a church / 2 hours / Sun, 1882, March 7-1-3.

Jan 1-10 / One large spot on sun / Sci. Gazette 1-40.

Jan / q's / Philippines / II [medium] BA '11.

Jan 6-7 / night / Bohemia / The first of many shocks. On Jan 1, a sound like thunder. / BA 54-155.

Jan 13 / Bohemia / q—wells in several places which for years been dry [Reverse side] suddenly filled with water. / BA 54.

Jan 15 / q—stat above / (Cut) / Boves, Piedmont / 3 shocks / 12:20 / 12:30 / 2 a.m. / A meteoric [Reverse side] stone fell on this day at Arenazzo, [near Ferrara (Chladni). / B Assoc '54/156 / (F).

Jan 13 or Feb. 6 / (It) / Renazzo, Bologna, Italy / Metite / B.A. '60.

Jan 19 / bet 11 a.m. and noon. / Q, Ionian Islands, followed by heavy rain which lasted several days. / BA 54.

toward end of Jan. / Many stones near Arenazzo, Bologna / An de Chimie 2/31/261.

Jan 22 / [London Times], 2-c / 27-3-e / Feb 5-3-c / Comet.

Jan 30 / “Terrible shocks” / Philippines / BA 54.

[BCF, p. 395:

February, 1824—the sounds of Melida.]

Feb 3 / Waterford / Lightning reduces a girl to ashes.

Feb 4 / Shocks / Sardinia / and a “noise like that of a storm” / BA '54.

[1824 Feb 11] / B / Irkutsk / slight shock / Feb 11, 1824 / 3 severe shocks, March 8 / BA Rept '54/124.

[BCF, p. 395:

Upon Feb. 11, 1824, a slight shock was felt at Irkutsk, Siberia (*Rept. B. A.*, 1854-124). Upon February 18, or, according to other accounts, upon May 14, a stone that weighed five pounds, fell from the sky at Irkutsk (*Rept. B. A.*, 1860-70). Three severe shocks at Irkutsk, March 8, 1824 (*Rept. B. A.*, 1854-124.)

Feb 18 / or, other accounts, May 14—stone weighing 5 pounds fell at Irkutsk, Siberia. / Rept. B. Assoc 1860/70 / See 1829.

Feb. 21 / Greece / [Io]nian island of [S]anta Maura / q. / I / [light / BA 1911].

Feb 26 / [London Times], 3-b / q / Bergen, Norway.

March 1 / Berlin / Fireball / BA 60. [BCF, p. 395 / See Feb. 11, 1824.]

March 24 / Op Mars / Annals of Phil 23/107 / ac to Francis Baily.

April 10 / Very severe shocks, Jamaica, preceded by a violent wind. / BA 54.

Ap. 17 / Linlithgowshire / Fireball / BA 60.

Ap. 20 / ab. 3 a.m. / “Terrible” q / St Thomas, W. Indies / BA 54.

[BCF, p. 395 / See Feb. 11, 1824.] from last of May to last of Aug. / No sunspots were observed by Flaugergues. / Edin J. Sci 2/172.

June 23 / Q in Persia, and renewal of volc in Java which began on 9th. / BA 54.

June 25 / 5:30 a.m. / Shiraz / great q / An Reg '24-72.

July / D-84 / fish / Meerut, India / Liv Age 52/186.

★ ★

[BCF, p. 86:

Apart from our three factors of indication, an extraordinary observation is the fall of living things without injury to them. The devotees of St. Isaac explain that they fall upon thick grass and so survive: but Sir James Emerson Tennant, in his *History of Ceylon*, tells of a fall of fishes upon gravel, by which they were seemingly uninjured. Something else apart from our three main interests is a phenomenon that looks like what one might call an alternating series of falls of fishes, whatever the significance may be:

Meerut, India, July, 1824 (*Living Age*, 52-186); Fifeshire, Scotland, summer of 1824 (*Wernerian Nat. Hist. Soc. Trans.*, 5-575); Moradabad, India, July, 1826 (*Living Age*, 52-186); Ross-shire, Scotland, 1828 (*Living Age*, 52-186); Moradabad, India, July 20, 1829 (*Lin. Soc. Trans.*, 16-764); Perthshire, Scotland (*Living Age*, 52-186); Argyle-

shire, Scotland, 1830, March 9, 1830 (*Recreative Science*, 3-339); Ferid-poor, India, Feb. 19, 1830 (*Jour. Asiatic Soc. of Bengal*, 2-650).

A psycho-tropism that arises here—disregarding serial significance—or mechanical, unintelligent, repulsive reflex—is that the fishes of India did not fall from the sky; that they were found upon the ground after torrential rains, because streams had overflowed and had then receded.]

ab July 1 / Herrings / Shalhinday, Bleachfield, Eng. / Phil Mag 64/152.

July 13 or 14 / Tidal Wave / Coast of Devonshire. Had been fine weather but “the atmosphere seemed to be charged with electric matter.” / Gents Mag, Aug., 1824 /

[Reverse side] But from the south and west a “continued peal of thunder was heard, which lasted for many hours.” Then a huge tidal wave rushed up the river Dart.

July 18 / departments of Fran[ce], Eastern Pyrenees, Ande, Tarn, etc. / Lightning in the sky and flashes like lightning all

[Reverse side] day at Carcassone. / No thunder heard. / At ab. 10:20, a q or shock. / See Feb 24. / B Assoc 54/160 /

[Front side] ([F]eb [2]4 see).

July 18 / France—Eastern Pyrenees / ab 10:20 p.m. / At Mont-Louis, where weather had been clear, a violent storm immediately after the q. / BA 54 /

[Reverse side] At Perpignan air seemed filled with burning vapors. At Carcassone a blast of wind as if from an explosion. During the day all points of horizon illuminated by lightning but no thunder.

July 29 / Eruption / Canary Islands / lasted into Oct or Nov / BA 54.

Aug 11 or 12 / Tuscany, Italy / Fireball / BA 60.

Aug 11 and 12 / Qs and dry fog in Tuscany / C.R. 17-622.

Aug 11-12 / (Cut) / night / Alps—a traveller reported a 3-minute globe of fire. / [Reverse side] Arago, Oeuvres XI/ 573.

Aug 12 / Romagna, Italy / q. / I / [light / BA 1911].

Aug 13 / On 12th, a fireball. / Next morning, “a mist of peculiar character”. Then early morn shocks. / Tuscany /

[Reverse side] BA 54/161.

Aug 13 / Dust from a black cloud over Buenos Aires and [Reverse side] 40 leagues away discharged again. / Thom[p]son, Intro to Met—p. 158.

Aug 18 / At Harderwyck, in Guelderland. News from Brussels, in Leeds Mercury, Sept 11.

[Reverse side] A tremendous noise, so great people thought roofs coming down, and q.

(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.

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