

# fortean times

the journal of strange

£2.50

**SPOOKY AS CHARGED**  
JUDGEMENT DAY FOR SPIRITS

**THE LIGHT FANTASTIC**  
ALL YOU NEED TO KNOW ABOUT EARTH LIGHTS

**ROSWELL RAVE ON**  
THE PARTY'S OVER...



# MANMACHINE

PUTTING ARTIFICIAL INTELLIGENCE TO THE TEST

9 770308 589132

10 >



## MARTIAN MADNESS

FOR DETAILS OF SUBSCRIPTIONS, HOW TO ENTER COMPETITIONS, HOW TO SUBMIT MATERIAL AND OTHER INFORMATION FOR NEW READERS, SEE PAGE 61.

SUBSCRIPTION ENQUIRIES  
01454 202515  
MERCHANDISE & BOOK ORDERS/MAIL ORDER  
01789 490215  
GENERAL FT ENQUIRIES  
0171 470 2433  
PICTURE ENQUIRIES and SYNDICATION  
Express Newspapers syndication 0171 922 7906

We occasionally use material that has been placed in the public domain. It is not always possible to identify the copyright holder. If you claim credit for something we've published we'll be pleased to make acknowledgement.

YOU CAN REACH FT ON THE INTERNET  
[www.forteanimes.com](http://www.forteanimes.com)

### THE GANG OF FORT

**EDITORS**  
BOB RICKARD, PAUL SIEVEKING  
**MANAGING EDITOR**  
JOE GARDINER  
**ASSOCIATE EDITOR**  
JOE McNALLY  
**ART DIRECTOR**  
ETIENNE GILFILLAN  
**PICTURE RESEARCH**  
LISA ANDERS, TARA FISHER  
**CONTRIBUTING EDITORS**  
MIKE DASH, STEVE MOORE, IAN SIMMONS  
**RESIDENT CARTOONIST**  
HUNT EMERSON  
**FORTEAN STUDIES EDITOR**  
STEVE MOORE  
**EDITORIAL ADMINISTRATOR**  
JONATHAN BRYANT  
**PUBLISHER**  
JOHN BROWN PUBLISHING LTD.  
THE BOATHOUSE, CRABTREE LANE, FULHAM,  
LONDON SW6 6LU, UK.  
TEL: 0171 470 2400 / FAX: 0171 381 3930  
**PUBLISHER MIKE DASH**  
**ASSISTANT PUBLISHER LYNDA WHEELER**  
**ELECTRONIC PUBLISHER JOHN INNES**  
**CIRCULATION & SUBSCRIPTIONS MANAGER**  
LIZANNE BARBER  
**CIRCULATION & SUBSCRIPTIONS EXECUTIVE**  
KAREN WYATT  
**MERCHANDISE EXECUTIVE TERESA STOW**  
**PRODUCTION MANAGER DEBBIE BICKNELL**  
**ADVERTISING ENQUIRIES**  
FAX: 0171 381 6903  
**ADVERTISING MANAGER PAUL COGGINS**  
TEL: 0171 470 2437  
[paulc@johnbrown.co.uk](mailto:paulc@johnbrown.co.uk)  
**CLASSIFIED ADVERTISING CARL RUSHWOTH**  
TEL: 0171 470 2430  
[carlr@johnbrown.co.uk](mailto:carlr@johnbrown.co.uk)

**AD DESIGN**  
KEITH JACKSON, RACHAEL KNAGGS  
**AD PRODUCTION**  
ZOE GRAY  
**ORIGINATION**  
**GRAPHIC IDEAS STUDIOS**  
PRINTED BY  
ET HERON

**DISTRIBUTION**  
Distributed in UK by COMAG:  
Taverstock Road, West Drayton, Middlesex UB7 7QE  
Tel: 01895 444055 / Fax: 01895 433602  
Record Shop and Speciality Store distribution by Viz  
Comic Distribution, PO Box 1JE, Newcastle upon Tyne,  
NE99 1JE. Tel: 0191 281 5629  
Fax: 0191 281 1449  
Distributed in USA by Eastern News Distributors Inc:  
2020 Superior St, Sandusky, Ohio 44870.  
Tel: (212) 649 4484 / Fax: (212) 265 6239  
US readers can discover their nearest FT stockist by  
ringing Eastern News toll-free on (800) 221 3148.  
**STANDARD SUBSCRIPTION RATES**  
UK £30 per annum (12 issues); EU £37.50/US\$70;  
REST OF THE WORLD £45/US\$90

**US POSTMASTER**  
Fortean Times is published every month for  
US\$59.40 per annum. Second Class postage is paid at  
Champlain, NY and additional mailing offices. Please  
send address changes to:  
Fortean Times, 3330 Pacific Avenue, Suite 404,  
Virginia Beach VA 23451-2983, USA  
 Member of the Audit Bureau of Circulations.  
Printed in the UK.  
ISSN: 0308 5899  
© Fortean Times: August 1997

Having worked beyond expectation for a month after landing on Mars on 4 July, NASA's Pathfinder and rover have shut down. The batteries are flat and there might not be enough power from the solar cells to help it survive the deep cold of the Martian night. But almost as interesting as the data and pictures the probe sent back has been the reaction of terrestrials to the mission's success. Around the world, millions of people logged onto NASA's internet site to view stills and movies beamed direct from the cameras 120 million miles away. In Washington DC's Planet Hollywood restaurant, diners could watch those scenes on 15 giant video screens while they munched their burgers. Sales of anything Mars-related went ballistic. There was a lively, if dubious, trade in plots of Martian land and two Yemeni men attempted to sue NASA for trespassing, claiming they had inherited Mars from their ancestors.

Within a week, the conspiracy-based sceptics were expressing their doubts. The Usenet newsgroup **sci.space.policy** became very excited by the suggestion that certain views of the Martian landscape were being suppressed because they showed a discarded Evian water bottle near the large rock dubbed Barnacle Bill. Others identified the landscape as "obviously" the New Mexico desert near Roswell, alleging, once again, the hackneyed idea that it was all being staged in a studio set somewhere, as dramatised in the 1978 film *Capricorn One*. On another newsgroup - **alt.conspiracy** - the veracity of the landing and photos was accepted as continuing until "life is found

there", at which point said one confident poster, "the transmissions will cease, blamed on an equipment malfunction" while "the US government will continue receiving them in secret". Some of this was provoked, perhaps intentionally, by a flowering of spoof web sites showing out-of-focus pictures of Martian litter.

NASA's Jet Propulsion Laboratory said they had been inundated by claims from people seeing hidden images - animals, faces, even a sun god - in the Pathfinder's photos of the rugged Martian landscape. "You name it, they're seeing it," said chief camera scientist Peter Smith from the University of Arizona. Regarding the sun god, he said: "They outlined its pattern in a rock and, by God, once they did that you couldn't help but see it."

Curiously, there is a legal theme to this issue. On page 22 Andrew Dennis examines a number of legal disputes over haunted houses, channelled teachings and other Fortean contested in the courtroom. As in the case of Australia's 'Noah's Ark' trial - see the report by Richard Seary on page 46 - the judgement side-steps the issue of the reality of the Fortean topic to concentrate on the realities of ownership, trade and misrepresentation. We are also pleased to welcome Margaret Jervis to our Forum section. She is an experienced commentator on 'Satanic child abuse' issues and, on page 48, summarises the recent conclusion of a long-running case involving two Newcastle nursery school teachers.

 Paul Sieveking

### FEATURE WRITERS THIS ISSUE

**DAVE WALSH**  
Dave (daev) Walsh is an internet consultant who resides in Dublin from where he writes his weekly online email newsletter *Blather* ([www.nua.ie/blather](http://www.nua.ie/blather)). He also compiles alternate instalments of 'Wired for Weird' for FT. He skives off on expeditions of a Fortean nature into the wilds of Ireland. [daev@fringeware.com](mailto:daev@fringeware.com)

**ANDREW DENNIS**  
Andrew is 25 years old and lives in London with his wife and two kids. He works as a solicitor for the city firm of Barlow Lyde and Gilbert,

specialising in civil engineering disputes, and has taken an active role in the process of establishing the Charles Fort Institute. He is also a stalwart of the 'Fortean' e-mail list and was recently accused of "conspiring to bring about the death of 20th-century thought." Asked if he had anything to say for himself, he replied "I look far less deranged in real life."  
[andrew@fidai.clara.net](mailto:andrew@fidai.clara.net)

**PAUL DEVEREUX**  
Aged 52, Paul is a veteran of Earth Mysteries research, editing *The Ley Hunter* for

20 years from 1976 and a working director of the Dragon Project Trust since 1977. He has written and co-written 19 books to date, excluding contributory chapters in other books. His latest, *The Long Trip: A Prehistory of Psychedelia*, has just been published by Penguin/Arkana Original in the USA, and next month his long-awaited study, with Peter Brookesmith, *UFOs and Ufology*, will be published by Blandford Press in the UK. He is currently working on a book on lucid dreaming with his wife Charla while commuting between home in Oxfordshire and lecturing in the USA. [devereuxp@aol.com](mailto:devereuxp@aol.com)



STRANGE DAYS HEADER  
JASON FORD



FORUM HEADER  
PATRICK REGOUT



LETTERS HEADER  
PATRICK REGOUT



REVIEWS HEADER  
PATRICK REGOUT



STRANGE DAYS FRIEZE  
PATRICK REGOUT



FORUM ALIEN  
FABRICE

# EVERYTHING YOU'VE ALWAYS WANTED TO KNOW ABOUT EARTH LIGHTS



PROJECT HESSDALEN

HIGHLIGHT: The "inverted Christmas-tree-shaped" light, photographed by Arne P Thomassen on 25 September 1985 at Hessdalen, Norway

**THE ASSOCIATION BETWEEN UFOS AND ALIENS - THE EXTRA-TERRESTRIAL HYPOTHESIS (ETH) - IS WHAT HAS DRIVEN MAINSTREAM UFOLOGY FOR ITS FIRST HALF-CENTURY OF EXISTENCE. RESEARCHER PAUL DEVEREUX FEELS THAT THE CONCEPTS, BELIEFS AND FUNDAMENTAL ASSUMPTIONS OF MAINSTREAM UFOLOGY ARE DUE FOR A MAJOR OVERHAUL. IF WE ACKNOWLEDGE THAT THE ETH HAS ITS CULTURAL AND HISTORICAL ROOTS IN FORTIES AND FIFTIES AMERICANA, HE ARGUES, AND HAS OUT-LIVED ITS SHELF-LIFE, WE SHOULD BE LOOKING TO OTHER, MORE VIABLE HYPOTHESES SUCH AS EARTH LIGHTS**

In recent years earth lights research has survived its own reinvention. In practice it is the study of glowing, polymorphous forms by night (either stationary or aerobatic and ranging from inches to several yards across) to shiny metallic or pitch-black forms by day. The term earth lights was coined originally as a nickname to distinguish the phenomena from ideas of ET craft.

The view of the earth lights researcher is that most UFO reports are just that ... reports. There are any number of reasons for them and only a very small percentage truly relate to anomalous phenomena. Of that small percentage, it is likely that a good proportion will be earth lights. It is possible, if unlikely, that another portion relates to actual ET craft but, even if this is so, earth lights researchers argue that they form a smaller proportion of the category of UFO reports than that accounted for by earth lights.

Like Æsop's tortoise, earth lights research has progressed to the point where it has passed other ufological hares either without them noticing. It can now attract significant funding and the interest of mainstream scientists, and is advancing informed, cutting-edge scientific hypotheses as well as speculations that make the ETH look the intellectual dinosaur it is. Moreover, earth lights research can offer more than just anecdotal evidence - a trend that looks set to outstrip any other ufological approach. What follows is my account of the value and success of this important but little-known story.



PAUL-FELLA: Paul Devereux on location in the Kimberley Mountains, Western Australia where he studied the 'min-min' lights

ERLING STRAND

## SEEKING THE LIGHTS

Charles Fort was among the first to note that strange "meteors" appeared coincidentally with earthquakes. It was not until the 1960s, however, that ufologist John Keel and French researcher Ferdinand Lagarde linked the appearance of unusual lights with areas of geological faulting and magnetic anomaly.

In 1975, Andrew York and I mapped occurrences of strange phenomena recorded over several centuries in Leicestershire [see *FT11:5, 12:8*]. Meteorological anomalies such as "strange lightning" and reported UFOs had their greatest incidence over the faulted regions of the county. Two years later, Michael Persinger, a neuroscientist and geologist at Laurentian University in Canada, together with Gyslain Lafrenière, published a study of the United States which similarly indicated a correlation between higher levels of reported UFO activity and the locations of earthquake epicentres.

Persinger and Lafrenière saw UFOs as electromagnetic phenomena arising from the tremendous energy associated with the constantly rising and falling tectonic stress in the Earth's crust, whether or not full-blown earthquakes occurred. They visualised fields of forces operating evenly and quietly over large regions which could become focused at any given time in a few small areas of particular geological resistance or instability such as fault lines, mineral deposits, unyielding rock outcrops, hills, mountains and so on. They likened this to the energies in the atmosphere being equally capable of producing a gentle breeze over a wide area or a localised ferocity like a tornado. "The existence of man upon a thin shell beneath which mammoth forces constantly operate, cannot be over-emphasised," they argued. This was the first outing of what has come to be known as the Tectonic Strain Theory, or TST.

Harley Rutledge, a physics professor at Southeast Missouri State University, conducted field investigation of an outbreak of lights that began in 1973 around Piedmont. The results of this were published in *Project Identification* in 1981. In 1986, Persinger with John Derr, a

leading US geologist, studied an earlier outbreak of lights in the Yakima Indian Reservation, Washington State. Firewardens on the reservation saw huge orange lightballs floating above rocks, as well as smaller "ping-pong balls" of light bounding along ridges. Glowing clouds and subterranean rumblings were also noted

during this period. The firewardens took photographs of the lights and triangulated the positions using radios. Scientific observations followed: Derr and Persinger showed that the Yakima lights were seen most often in the vicinity of the fault-riddled ridges that cut across the reservation and with Satus Peak, the general area of a surface rupture and one of the stronger earthquakes in the region during the 13 years covered by the study. Successive reporting of lights occurred in the seven months preceding the biggest earthquake of the studied period. Regional seismic activity also increased during the times in 1972 and 1976 when most sightings were reported. (The significance of the Yakima case is that the site is adjacent to the part of the Cascades Mountains where pilot Kenneth Arnold saw the flight of nine glittering objects in 1947 that initiated the flying saucer era. In fact, Arnold landed his plane at Yakima airfield shortly after his encounter.)

But it was the outbreak of lights at Hessdalen, a valley 70 miles (112km) south-east of Trondheim in Norway, that really switched on the earth lights. From about November 1981, people living in the area began to see unexplained lights. These appeared as white or yellow-white spheres, 'bullets' with pointed end downwards and inverted "Christmas tree" shapes. Strong, localised flashes in the sky were also observed and there were reports of underground rumbling. By summer 1983, hundreds of reports of strange lights had been made by the inhabitants

of Hessdalen, so Norwegian and Swedish UFO groups formed Project Hessdalen. From 21 January to 26 February 1984, the project continuously monitored the valley using instrumentation, including radar, and succeeded in obtaining photographs of strange lights plus a number of instrumental readings. Such work then continued sporadically over a few years. ▶

### TST: A CRITIQUE

A particularly vocal critic of Persinger's Tectonic Strain Theory (TST) has been the Canadian ufologist, Chris Rutowski. He makes the valid point that the raw data used by Persinger for his initial nationwide North American studies were poor. Persinger's reply is that the use of multivariate analysis techniques specifically takes into account uneven data. It could also be pointed out that other researchers, using completely different types of research and other data, arrived at results also pointing to tectonic-related factors. I have argued that whether the TST is valid or not, something produces earth light activity – lightning existed, for example, long before any modern theories explained its occurrence (and these remain incomplete).

Since 1979, Persinger, alone and with associates, has produced about two dozen technical papers analysing local episodes of luminosity reports and studies of larger regions. Rutowski and others have continued to criticise the quality of the raw data and have also accused Persinger of favourably biasing his results by arbitrary selection of temporal periods. So, for example, Persinger will sometimes check lead and lag times of six months around an earthquake for reports of light phenomena. Critics think this is too long.

I, on the other hand, think that Persinger is too conservative! He cites his own experience of seeing golden balls of light break through cloud cover within 10 miles (16km) of the epicentre of the November 1996 Cornish earthquake – but his sighting occurred two years previously. Critics also complain that Persinger seeks light phenomena reports over too large an area. Again, however, the modest 3.8 (Richter) Cornish quake produced light phenomena 100 miles (160km) distant, and possibly further. It is perhaps difficult for us to comprehend the magnitude and complexity of the systems involved.

Rutowski's strong demands for repeatability ignore the complexity of nature – assuming that it works like simple clockwork. Not all thunderstorms produce ball lightning, nor all earthquakes earthquake lights.



PAUL DEVEREUX



ESTATE OF WJ VOGEL



PROJECT HESSDALEN



PROJECT HESSDALEN



PROJECT HESSDALEN

**LIGHT RELIEF:** [From the top] WASHINGTON STATE, USA: the fault-riddled Toppenish Ridge on the Yakima Indian Reservation, where many lights were seen in the 1970s.

YAKIMA: a light photographed on 3 September 1971 by (then) chief fire warden WJ Vogel [800mm lens, 30-second exposure]. HESSDALEN: a curiously pulsing light snapped in October 1982 by Arne P Thomassen [Minolta XG-2, 400mm/5.6 lens, 5–10 seconds].

HESSDALEN: a sequence of two snaps showing a light moving and changing shape, taken on 18 February 1984 by Roar Wister. RESEARCHERS: Erling Strand, director of Project Hessdalen, (left) with pioneering American ufologist Prof J Allen Hynek at Hessdalen in January 1985.



PAUL DEVEREUX



JOHN DEBERIUS (GEOLOGICAL SURVEY)



PAUL DEVEREUX



PAUL DEVEREUX

**LIGHT ENTERTAINMENT** (from the top):  
**HESSDALLEN:** headquarters of Project Hessdalen in 1984.  
**JAPAN:** a hemispherical earthquake light near Mount Kimyo, Matashiro region, photographed at 3.25am on 26 September 1966, with a fisheye lens by dentist T Kuribayashi. It lasted for 96 seconds. See 'Planetary Lights' panel.  
**STAND HERE:** official viewing spot for the 'Marfa Lights', looking over Mitchell Flat towards Chinati Peak in Texas.  
**LOOK OUT:** Devereux's team sets up on Mitchell Flat.

► 1982 saw my first book on the subject, *Earth Lights*, and the following year British ufologist Jenny Randles came out with *The Pennine UFO Mystery*, telling of phenomena in the hill chain and making connections with tectonic factors. Inspired by the Norwegian effort, Project Pennine was formed in 1986 by David Clarke, Andy Roberts and colleagues. Visual historian and writer Hilary Evans started circulating

against newly-available geological information. We found that the lights followed the local deep-rooted Mochras Fault like beads on a thread. Indeed, incidence dramatically increased with proximity to faulting. Furthermore, it transpired that between 1892 and 1906 there were several earthquakes in various parts of Wales. In October, 1904, for example, immediately prior to the onset of the Barmouth wave, there was a quake at nearby Beddgelert.

## INTO THE FIELD

By 1990, I felt that scientific field study was the only way to really understand earth lights. So, working under the auspices of a research/think tank group known as the International Consciousness Research Laboratories (ICRL), sufficient funding was obtained to start conducting field enquiries.

In June 1993, we looked at the 'Hooker Light' in New Jersey, USA. In the Seventies, crowds of youngsters regularly gathered to view a strange light that seemed to wander along a disused railway near Washington Township. The track is now a pipeline corridor through a forest, and we were able to prove that the effect was caused by a visual distortion of car lights on a road that cut the corridor at an angle two miles from the viewing point. Other, inconclusive, studies followed, then we visited the Marfa area of Texas' Big Bend country between 6-15 March 1994. Strange lights have been reported in this region for more than a century (the first account dates from 1617).

Physicist Hal Puthoff, also an ICRL member, joined this expedition. We were eventually able to dismiss a number of luminous effects popularly assumed to be "Marfa Lights" as occasional, but dramatic mirage effects and lights of vehicles on the Marfa-Presidio road distorted by distance. We also determined that lights on vehicles negotiating rough tracks on the undulating desert-scrub of Mitchell Flat can look like mysterious lights skimming the ground, fusing and parting. However, interviews with local witnesses convinced us that genuine anomalous lights probably did sporadically appear in the vast region.

Acting on a tip offered by a teacher who'd had a close encounter with a 3ft (90cm) diameter light, we conducted observations in an uninhabited valley in the Chisos Mountains, 80 miles (130km) from Marfa. At 9.10pm on 12 March, a completely unexplained large white flickering light was seen for about 10 seconds at the foot of a nearby mesa.

an archival portfolio called *Bolide* among researchers interested in what he was calling BOLs (Balls of Light).

Although earth light activity steadily decreased in Hessdalen, more than 50 observations of light phenomena were made during seismic monitoring in the Saguenay - Lake St John region of Canada by Quebec University between 1 November 1988 and 21 January, 1989. According to a report in *Nature*, balls of light several yards in diameter popped out of the ground, sometimes close to observers. Other balls of light, both stationary and moving, were seen many hundreds of feet in the air. Some of these lasted for up to 12 minutes. It seems that these phenomena were coincident with rising tectonic strain.

In my *Earth Lights Revelation* of 1989, geochemist Paul McCartney and I published a report on our long-term investigations into an 'earth lights zone' between Barmouth and Harlech in north-west Wales which had been active in 1904-1905. Because useful contemporary reports had been made of these Welsh lights (which included blood-red spheres a few feet across rising from fields and roads, glittering diamond shapes hugging isolated roof ridges and other remarkable luminous appearances), we were able to accurately map the locations where they occurred

## PLANETARY LIGHTS

After prolonged resistance, science now accepts that the Earth produces lights. Anecdotal evidence for "earthquake lights" (EQLs) existed for many years, but proof finally came in a series of photographs taken during a swarm of earthquakes in Japan in 1967. EQLs can take many forms, from sparkles on hillsides to generalised glows, streamers, columns and balls of light in the sky. The great

Tashkent earthquake of 1966 was preceded by an intense white light that lit the interiors of people's homes. Afterwards, balloon-like balls of coloured light hung in the atmosphere. In 1996, lights in the week preceding the more modest quake in Cornwall, England, appeared as slow flashes in the sky, moon-like spheres, and rectangles of light making "precision" movements through the air.

Glowing balls accompanying some electrical storms are called "ball lightning" (BL) and it again took modern science many years to accept their reality. It did so only after a leading scientist, RC Jennison, had a 9in (23cm), blue-white sphere appear practically in his face during a plane journey in a thunderstorm in 1963. BL has its mysteries. To take just two examples: Jennison's sphere appeared in the virtually screened environment of an aircraft, and in 1958 Professor William Becker saw a basketball-sized, yellow-orange BL

enter a cabin in Minnesota, drop low over the floor, and closely trace the black pattern on an Indian rug!

Researchers agree that earth lights seem to be of the same family as EQLs and BL, but show some of their own characteristics, obvious among these being that they do not require earthquakes and thunderstorms to manifest. But they can also sometimes exhibit special features such as lasting longer than EQLs and BL. Lights in Hessdalen were occasionally seen to drift back and forth along mountain ridges for nearly two hours.

## FIRST CONFERENCE

Between 24 and 27 March 1994, Erling Strand, one of the directors of the original Project Hessdalen, convened a conference of international delegates variously involved in the study of earth light phenomena, plasma and nuclear physics. It was the first specialist earth lights conference, held to launch a new Project Hessdalen, and went largely unnoticed by mainstream ufology. With the support of Ostfold College, Norway, where he lectures, Strand is engaged on the "wiring up" of the Hessdalen valley, which is currently experiencing a modest resurgence of earth light activity. Automatic monitoring stations placed strategically along the valley will be triggered if electronic beams connecting them are interrupted by an earth light. As Strand comments: "We only need one light." This is a huge, costly project, but the first station was nearing completion in June 1997.

One of the Hessdalen Conference delegates was Professor Yoshi-hiko Ohtsuki of Japan's Waseda University, who is well funded to investigate reported earth lights zones around the world. He revealed to me that he had taken four highly-equipped expeditions to Marfa, and that on only one of them had he seen an earth light for certain. This changed shape only 100 yards (90m) in front of his team and was recorded on multiple video cameras and electronic monitoring equipment.

Between 28 September and 14 October 1995, Strand and I, accompanied by a TV

producer with a Hi-8 video camera, conducted a joint expedition to the remote Kimberley region of Western Australia, acting on reports of strange lights in the area.

We set up observing stations at various locations over the expedition period. On the night of 3 October, we overlooked a small valley in totally uninhabited country. Short-lived, blue-white lights appeared sporadically through the night, moving against the opposite slope of the valley, half a mile away. These lights, often of low-intensity, proved elusive, but Strand captured one of them on camera.

By 8 October, we had seen only a few possible anomalous lights at other locations, but that night a bright light was seen that seemed to emerge from a small hill in front of a ridge. It was vividly noticeable in an area devoid of all artificial lighting. It moved slowly downwards to the level of the desert, then disappeared. Because it was up to some 6 miles (10km) distant, we could not absolutely determine whether or not the unusual light was truly anomalous, but simultaneous with its appearance our magnetometer started recording huge field anomalies. (A peak-to-trough amplitude of 800 nanotesla on a 2Hz pulsation was recorded. A normal amplitude on that frequency is less than 1 nanotesla.)

The readings slowly subsided over a period of about five hours. If these events were causally related, then the readings support Persinger's predictions that earth lights will be accompanied by changes in the local geomagnetic field.

## THE POLTERGEIST CONNECTION

Associations between earth light outbreaks (especially ones of long duration) and the occurrence of what we might call 'poltergeist' activity can be found in reports spanning the world for more than a century. Aborigines in remote communities told me and colleagues during the Kimberley expedition that in periods when "min-min lights" are appearing, they often experience choking sensations and can even be thrown bodily through the air. They consider such events to be the attacks of small, hairy entities, invisible but exceedingly strong (how the Aborigines knew invisible beings were hairy wasn't explained). Further, they claim that these beings are pictured in the extremely ancient rock art to be found in the region.

Other examples of a poltergeist connection include the accounts of the firewardens on the Yakima Indian reservation who reported lights and odd sounds such as the ghostly crunching of gravel around their lookout posts. A classic example afflicted the isolated hamlet of Linley, in Shropshire; For several weeks in 1913, fiery balls of light were seen on the tower of the ancient church and lightballs also flitted around the nearby cottages. Metal door latches would fly open, chairs would hurtle across rooms, crockery would move of its own accord. When the lights stopped appearing, these unusual happenings also ceased.

Earth lights researchers do not think that such manifestations are paranormal in the commonly understood sense of that term. Rather, they suspect that whatever the energetic environment is that gives rise to the lights can also produce side-effects such as these 'poltergeist'-type events. One candidate is change in the geomagnetic field and similar effects have been reported at times of intense aurora borealis activity.



PAUL DEVEREUX QUESTIONING ABORIGINES

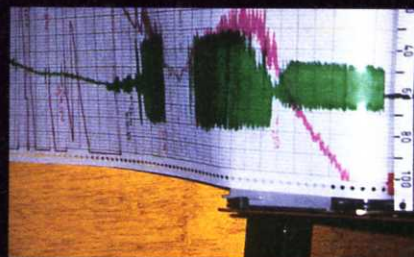


PROJECT HESSDALLEN 1994

LIGHT UP: [from top left]

Japanese plasma scientist Yoshihiko Ohtsuki addresses fellow earth-lights researchers at the 1994 Hessdalen conference. Devereux questions Aborigines about 'min-min lights' in Australia's Kimberley region.

KIMBERLEY: a fleeting light, snapped on 3 October 1995, by Erling Strand. This is a scanned-digitised enlargement, shown here for the first time.



PAUL DEVEREUX

LIGHT FANTASTIC: [above and below]

Anomalous reading from a magnetometer as they were printing out, during the 1995 ICRL-Project Hessdalen expedition to Kimberley. The normal reading is the thin green pen-line on the left.

KIMBERLEY: two sequential photos taken two minutes apart, on 8 October, during the 1995 ICRL-Project Hessdalen expedition to Kimberley. They show the same light, which emerged from a low hill 3-6 miles (5-10km) away, moving to the left (eastwards) relative to foreground objects illuminated by moonlight [Pentax Program A, 200mm lens, 30 seconds]. These are multi-generation enlargements.





PAUL DEVEREUX



PROJECT HESSDALEN



ANTHONY DODD



PAUL DEVEREUX

#### INTO THE LIGHT [from the top]

Ancient Aboriginal rock art at Kimberley, Western Australia. The Aborigines claim that the strong, hairy entities that invisibly accompany the lights and attack witnesses are depicted in these prehistoric paintings. See Poletgeist connection panel.

HESSDALEN: this trace of light, recorded by Roar Wister [Pentax ME Super, 75mm/5.6 lens, 10 seconds] shows an oscillation determined to be at 7Hz. Pictures like these allowed You-suo Zou to identify the light as a moving plasma vortex.

YORKSHIRE: Ufologist Anthony Dodd snapped these lights flying low over Carleton Moor, near Skipton, on 14 March 1983 [Canon A1, 50mm lens with skylight UV filter, 400 ASA film]. Close study reveals soft black vertical lines on each of the lights.

Physicist David Fryberger (left) joins Devereux and Strand on an earth lights expedition to Mexico in 1996, to investigate a 'UFO flap'. Among the media hype and questionable video footage they found very few incidents worthy of further investigation. The rural Hispanics and Indians considered the lights to be the spirits of night-flying witches. Some unexplained diffuse flashes of light were observed on the flanks of Popocatepetl, a huge volcano that is producing over 1000 micro-quakes daily as it rouses into activity.

## WHAT ARE EARTH LIGHTS?

There are two separate questions about earth lights: How are they produced, and what is their nature? In arguments about whether or not the TST is valid, they often get hopelessly muddled. It doesn't matter whether the TST is right or wrong, or, more likely, requires further modification – it does not tell us about the properties of the phenomenon itself.

From the considerable reservoir of anecdotal data, we learn that the lights can be any colour, although white, orange, deep red and yellow-gold predominate. Their size can range from tiny balls to giant lightforms, although "basketball-size" is common. While their shapes are usually round or spherical, tubes, cigars, rectangles, diamonds, tadpole-shapes and irregular forms have frequently been described. Reports indicate that earth lights can issue various sounds, with hissing and buzzing noises predominant. Multiple earth lights flying together can display seemingly co-ordinated movements, as if operating within a single energetic field, and can divide and merge. They've also been seen emerging from or disappearing into the ground on many occasions, perhaps indicating a geological-tectonic connection. When free-floating, they seem to prefer the vicinity of mountain peaks and ridges, isolated rooftops and rock outcrops, towers and antennæ and other sharp or isolated features that tend to be charge collectors. This indicates that they have some kind of electromagnetic basis.

They often haunt bodies of water such as lakes and reservoirs, and are occasionally seen glowing beneath the surface of the water. Bodies of water can apply pressure to underlying faults (microquake activity around reservoirs is well recorded), as well as lubricating rocks – moist rocks emit more charged particles than dry ones.

The prevailing assumption is that earth lights are plasma of some kind. This view is supported by the 1994 work of You-Suo Zou of the Institute of Atmospheric Physics in Beijing's Academy of Sciences, and an associate of the Department of Meteorology at the University of Utah. He made a close study of the original Project Hessdalen data and noted corkscrew-like light traces in

photographs. Zou recognised this helical structure as typical of a plasma vortex in motion. Work with laboratory plasma (Zou cited Leibovich 1983, and Ma 1984) has revealed this structure, particularly in the tails of collapsing plasma vortices.

Under certain conditions, a plasma vortex can become a kind of solitary wave (soliton) and from the radar-recorded behaviour of some at Hessdalen, Zou saw evidence of wave energy propagation.

Three little-known aspects noted about earth lights might give us fascinating clues as to their deep nature:

### EARTH LIGHTS SEEM TO FLICKER ON AND OFF

Indications of this are non-anecdotal and come from various sources. One example relates to a photograph taken by Tony Dodd of two lights flying over Carleton Moor, Yorkshire, on 14 March, 1983. I showed a first-generation print of this to the physicist and writer Fred Alan Wolf. He noted that a faint, dark vertical line ran through each of the – a strobing action leaves a record of the camera's shutter motion in the dark lines.

Such strobing can go unnoticed by the human eye, as persistence of vision (flicker fusion) gives the impression of continuous luminosity. In an incident recorded by Project Hessdalen, a light visually observed as continuous returned only intermittent radar echoes.

A third example was provided by physicist David Kubrin and his first wife who saw a lightform hurtling along at treetop height above the Pinnacles Fault (adjacent to the San Andreas Fault) in California in 1973. The light created shock-waves in the air ahead of itself, indicating the presence of mass, but then stopped instantaneously, without deceleration, suggestive of no mass. Kubrin caught the decay of the lightform on camera.

### INTO THE TWILIGHT ZONE

The story of earth lights might become yet more bizarre. Members of Rutledge's Missouri field team, Project Hessdalen and some of the Yakima firewardens felt that some of the lights they observed interacted with them. UFO writer John Keel encountered purplish lightballs in the Ohio Valley that apparently hopped out of the way of his flashlight beam. "They have a crude level of consciousness," he told me. In March 1973, geologists Pat Kenney and Elwood Wright spent 20 minutes chasing a basketball-size light through the scrub of Mitchell Flat, Marfa, in their jeep. "It kind of looked like it was playing with us," Kenney remarked later. They could get no closer than 200ft (60m) to the light, which had the colour and intensity of a normal household lightbulb. "It had intelligence, definitely," said Kenney.

There are numerous other such accounts. But caution is required: a distant light moving randomly can falsely appear to be interacting with the witness and in close encounters it is possible that energy fields around a light might be responding to those around the witness in much the way a ball bearing reacts to a magnetic field. But some of the reports sound too specific to be so dismissed and we should not be too ready to laugh off the possibility that the lights manifest some primitive level of consciousness. This is especially true if they are macro-quantal events, for there is serious debate among some consciousness researchers, cognitive philosophers, neurophysiologists and other 'hard' scientists that consciousness might be inherent in the quantum field. This is because of the philosophical conundrum concerning how something as fundamental as consciousness could exist in the universe if it was not already present in the basic matrix. Some eminent brain scientists think that there might be structures within the human brain that can mediate the quantum flux. And who is to say that some complex geophysical phenomenon like an earth light couldn't act as a structure for a basic form of consciousness?

### EARTH LIGHTS CAN BE UNI-DIRECTIONALLY VISIBLE

There are numerous, widespread accounts of this bizarre effect. During the 1905 Barmouth-Harlech outbreak, a 4ft (1.2m)-long bar of blue light hovering over the road near Egryn chapel was visible to a group of observers from one side, yet completely invisible to a group standing on the other side of the phenomenon.

## EARTH LIGHTS APPEAR TO BE FLAT AND HAVE DEPTH SIMULTANEOUSLY, LIKE A POOR SPECIAL EFFECT IN A MOVIE.

In 1983, for example, a farmer in the Pennines saw a red sphere of light hovering above a stream. It then started revolving while giving the impression of being flat. I have witnessed this paradoxical aspect of lights and can vouch for its reality.

## THEORIES

Descriptions of earth lights hint at a phenomenon at the edge of normal physical manifestation. We might be seeing a macro-quantal phenomenon – a large-scale expression of the paradoxical conditions (from the viewpoint of classical physics) of the subatomic quantum.

Puthoff suspects that earth lights might be powered by something called Zero Point Energy. ZPE is an all-pervasive energetic field, a fluctuating energy that exists even in a vacuum at absolute zero. It is known to have small-scale physical effects, but some scientists, Puthoff key among them, feel that it is possible to extract useful energy from vacuum fluctuations. It might be that nature has been doing it already in the phenomena we call earth lights. Perhaps the lights are a kind of doorway between quantum and large-scale physical realities.

David Fryberger, of the Stanford Linear Accelerator Center, is developing a theory which has the lights resulting from a hitherto unknown particle he calls the "vorton", more exotic even than gluons, quarks and the other subatomic entities postulated by nuclear physics.

There might also be a "consciousness connection" with earth lights. Apparent paranormal phenomena are reported in areas of earth light activity. At Yakima and in the Pennines, for example, people have reported seeing fleeting manifestations of bizarre human figures. Voices are heard:

one Yakima firewarden told of hearing "happy little voices singing" and another of a disembodied voice "hollering". Strange odours are experienced. Earth lights researchers argue that these might be hallucinations caused by magnetic fields – associated with light phenomena closely encountered and generally in an area that is producing strange luminosities – affecting brain function in witnesses. As well as proposing theoretical clinical mind-body effects on witnesses, Persinger has conducted a series of practical experiments in which subjects are placed in a soundproof, isolated chamber, where they wear a helmet from which magnetic fields are directed at the magnetically-sensitive temporal cortex, which handles dreaming and other internal imagery such as memory, among other functions. Many people report vivid inner imagery episodes in which early and infantile memories are particularly common. Journalist Ian Cotton, for example, experienced two sessions with Persinger's magnetic helmet. He drifted into a kind of lucid dream state in which his consciousness became "like a video camera" looking at scenes from his early childhood. He saw the pattern on the wallpaper in his bedroom, the design of red roses on a table cover and other long-forgotten, intricate details. In a second session, a recording of temple bells was played, and Cotton experienced "a kind of booster rocket of realism" and found himself in a visionary reality so convincing that he felt he was in a temple, observing rows of brown-cowled monks.

In a few cases, it is possible that a close encounter with an earth light could precipitate an "alien entity" experience or even a full-blown UFO abduction. If one reads Budd Hopkins' *Intruders* with care, for example, it can be seen that the pseudonymous Kathie Davis encountered a ball of light before undergoing her abduction episode. In fact, everything in this now famous abduction case is consistent with an earth light being produced by local tremor activity. **ff**

## BUT THEY AREN'T UFOs

This charge from mainstream ufology concerning earth lights brings us full circle. Here are four typical queries that are frequently raised, with brief responses

### WHAT HAVE EARTH LIGHTS TO DO WITH "DAYLIGHT DISCS"?

If earth lights are a form of plasma, then this poses no problem, because a plasma looks shiny and metallic in daylight, and is likely to have a spherical, ovoid or discoid form. Moreover, there are pitch black objects sometime seen by day (both Strand and I have witnessed examples of these ourselves) which seem to be photon-absorbing instead of light-emitting. These bizarre phenomena – which can be round, square or irregular in form – might relate to earth lights in the way one pole of a magnet relates to the other.

### WHAT ABOUT THE SIZE ASCRIBED TO UFOs?

Some earth lights are reported as being many yards across. A modest example of this was

shown in the Quebec case (above) – the size, height and duration of some of these phenomena were clearly 'UFO standard'. The lights at Hessdalen were even larger. And lights seen at night, accounting for a huge percentage of UFO reports, can look large if bright enough – their size is easy to overestimate.

### HOW DO EARTH LIGHTS EXPLAIN CASES WITH RADAR-VISUAL ELEMENTS?

Plasma can return radar echoes. Indeed, even plasmas at too low a temperature to emit visible light can still reflect radar waves just like a metal surface (Zou 1994). During the first Project Hessdalen, radar echoes were repeatedly obtained from invisible objects hovering near ridges.

### WHAT OF FOLIAGE DAMAGE AND GROUND MARKINGS ASSOCIATED WITH SOME REPORTED UFO LANDINGS?

These are consistent with localised damage caused by energetic lightballs. Singed foliage, ground burns and grooves have all been associated with ball lightning.

It is most important not to confuse an actual sighting (that is, a set of lights in the sky) with a witness's interpretation of that sighting ("The lights are on a huge, dark craft"). Reports are all too often interpretations. There is no reason why earth lights and ET craft shouldn't co-exist, but earth lights researchers think it is an extraordinary coincidence that earth lights descriptively fit so much of what might be the residue of genuinely unexplained phenomena in UFO reports.

## SELECT BIBLIOGRAPHY

- Baker, Robert, "Alien Dreamtime", *The Anomalist*, no.2, 1995.
- Budden, Albert, *UFOS - Psychic Close Encounters*, Blandford Press, 1995.
- Clarke, David, and Oldroyd, Granville, *Spooklights - A British Survey*, private, 1985.
- Clarke, David, and Roberts, Andy, *Phantoms of the Sky*, Robert Hale, 1990.
- Cotton, Ian, "Dr Persinger's God Machine", in *The Independent on Sunday*, 2 July, 1996.
- Derr, J.S., "Luminous Phenomena and Earthquakes in Southern Washington", in *Experientia*, no.42, 1986.
- Derr, J.S., "Luminous Phenomena and their Relationship to Rock Fracture", in *Nature*, 29 May, 1986.
- Derr, J.S., and Persinger, M.A., "Quasi-Experimental Evidence of the Tectonic Strain Theory of Luminous Phenomena: The Derby, Colorado Earthquakes", in *Perceptual and Motor Skills*, no.71, 1990.
- Devereux, Paul, and York, Andrew, "Portrait of a Fault Area", Parts 1 and 2, in *The News* (now *Fortean Times*), nos. 11 and 12, 1975.
- Devereux, Paul, *Earth Lights*, Turnstone Press, 1982.
- Devereux, Paul, McCartney, Paul, and Robins, Don, "Bringing UFOs Down to Earth", in *New Scientist*, 1 September, 1983.
- Devereux, Paul, *Earth Lights Revelation*, Blandford Press, 1989.
- Devereux, Paul, "Meeting with the Alien", *New Ufologist*, vol.1, no.1, 1994.
- Devereux, Paul & Brookesmith, Peter, *UFOS and Ufology - The First 50 Years*, Blandford Press, 1997 (due November).
- Gaddis, Vincent H., *Mysterious Fires and Lights*, Dell, 1967.
- Gearhart, Livingston, and Persinger, M.A., "Onsets of Historical and Contemporary Poltergeist Episodes Occurred with Sudden Increases in Geomagnetic Activity", in *Perceptual and Motor Skills*, no.62, 1986.
- Hameroff, Stuart, "Quantum Coherence in Microtubules: A Neural Basis for Emergent Consciousness?", *Journal of Consciousness Study*, vol.1, no.1, 1994.
- Hopkins, Budd, *Intruders*, Random House, 1987.
- Keel, John A., *The 'Flap' Phenomenon in the United States*, (1969), New York Fortean Society ed., 1989 (reprinted from *Flying Saucer Review*, No.2, June, 1969).
- Keel, John A., *Operation Trojan Horse*, (1970), Abacus ed., 1973.
- LaBerge, Stephen *Lucid Dreaming*, Ballantine, 1985.
- Lagarde, F., *Flying Saucer Review*, vol.14, no.4, 1968.
- Laughlin, Charles D., "Archetypes, Neurognosis and the Quantum Sea", in *Journal of Scientific Exploration*, vol.10, no.3, 1996.
- McClure, Kevin and Sue, *Stars, And Rumours of Stars*, private, 1980.
- Ouellet, Marcel, "Earthquake Lights and Seismicity", *Nature*, 6 December, 1990.
- Persinger, Michael A., and Lafrenière, Gyslaine F., *Space-Time Transients and Unusual Events*, Nelson-Hall, 1977.
- Persinger, Michael A., "Geophysical Variables and Behaviour III. Prediction of UFO Reports by Geomagnetic And Seismic Activity" in *Perceptual and Motor Skills*, no.53, 1981.
- Persinger, M.A., "Expected Clinical Consequences of Close Proximity to UFO-Related Luminosities", in *Perceptual and Motor Skills*, no.56, 1983.
- Persinger, M.A., "Geomagnetic Variation as Possible Enhancement Stimuli for UFO Reports Preceding Earth Tremors", in *Perceptual and Motor Skills*, no.60, 1985.
- Persinger, Michael A., "The Tectonic Strain Theory as an Explanation for UFO Phenomena: A Non-Technical Review of the Research, 1970-1990", in *Journal of UFO Studies*, New Series, vol.2, 1990.
- Puthoff, H. E., has produced numerous papers on aspects of ZPE, including ones in *Physical Review A* nos. 39 (1989), 40 (1989), 44 (1991), 47 (1993), 49 (1994); *Physical Review D* no. 35 (1987); *Physical Review E* no.48 (1993); *Science* no.263 (1994).
- Russo, Edoardo, and Grassino, Gian Paolo, "Ufology in Europe: or, What is America Coming To?", in *International UFO Reporter*, vol.14, no.2, March/April, 1989.
- Rutledge, Harley D., *Project Identification*, Prentice-Hall, 1981.
- Rutowski, Chris A., "Critical Comments about Earth Lights and the TST", and "The TST: Down for the Count", in *Journal of UFO Studies*, new series vol.2, 1990.
- Salisbury, Frank B., The Utah UFO Display, Devin-Adair, 1974.
- Sotomayor, Hector Escobar, "The Mexican Euforia", in *UFO Times*, 41, May-June, 1996.
- Stacy, Dennis, "Transcending Science", in *Omni*, December, 1988.
- Strand, Erling, *Project Hessdalen 1984 - Final Technical Report, Part One*, Project Hessdalen.
- Zou, You-Suo, "Some Physical Considerations for the Unusual Atmospheric Lights in Norway", 1994 (unread paper at Hessdalen Conference, Norway, 1994).