

MAGONIA



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Why didn't they believe this man when he said he hadn't seen UFOs? Curtis Peebles looks at the case of the fire-flies from space.

Matt Graeber searches for meaning in the details of UFO stories.

The Pelican asks:
will the real Dr Hynek please stand up!



MAGONIA 78
(incorporating MUFOB 125)

JUNE 2002

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SUBSCRIPTION DETAILS
Magonia is available by exchange with other magazines, or by subscription at the following rates:

UK (4 issues) £5.00
Europe (6 issues) Euro20.00
USA (6 issues) \$20.00
Elsewhere (4 issues) £8.00

US subscribers must pay in dollar bills. We are unable to accept checks drawn on American banks.

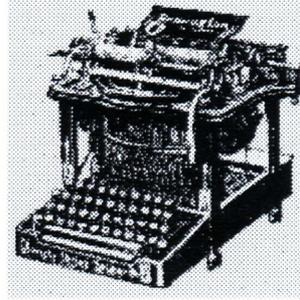
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EDITORIAL NOTES

The *Fortean Times* UnConvention was back at the Commonwealth Institute in April, after the gap last year when the building was closed for renovations (prize to anyone who can discover what had actually been renovated in the Institute!).

The meeting had had a lot of media pre-publicity around the theme of 'the death of ufology', and this was the subject of the closing panel discussion with six ufologists (including your editor) and Colin 'Quid est Veritas' Bennett, author of a recent reassessment of George Adamski. Bennett became the victim of a six onto one attack, largely as a result of his earlier talk to the UnConvention, which seemed to equate hard-line scepticism with anyone who had the painfully utilitarian idea that it might be a good thing to find out whether an event had actually happened or not. Such people are seeking "the shining truth: a clean and pure thing as terrifying as monolithic Nazi architecture", according to Bennett

Sceptics are guilty of 'destructive cultural scepticism' in failing to recognise the scientific and engineering genius of Barnes Wallace, Alan Turing and, er, Leonard Cramp. Sceptics, he tells us, have 'a terrible psychological problem with wonder' which is based on their 'cultural fear'. Reality, Bennett told us, is an impostor; it is "a late and rather callow arrival on the European stage". Apparently Shakespeare knew nothing of it. People who insist on seeking reality are using the totalitarian philosophy of Mao, Stalin, Hitler and, of course, Margaret Thatcher (who was in Bennett's eyes doubly damned by being the only British Prime Minister with a science degree).

There is one point where I might agree with Bennett. He, like I do, rejects "the simple-minded idea of hoaxing and imposture ... For a minute a new 'reality' ... comes about.

True, this is a transient bubble-world, a kind of virtual construct, but nevertheless the hoax is powerful enough to change totally the entire complex of a deep-rooted group identity". This is good stuff, and we looked at some of these ideas in the 'Hoax' issue of *Magonia* last year (no. 75).

Unfortunately Bennett then loses this insight by assuming that it is only the wicked sceptics who cannot understand the meaning of hoaxes. In fact we can see that it is the believers who reject the significance of hoaxes, assuming that they are only constructed for monetary gain.

The odd thing is that most of what Bennett criticises about 'sceptics' applies more accurately to believers such as the followers of his proto-hero George Adamski. At the end of the panel discussion he tied himself up in amusing post-modernist knots trying to avoid the question "do you think George Adamski really met a spaceman?" In fact, most sceptics aren't too bothered by this question. They'd just assume 'no', and go onto the more interesting issues of what Adamski's story told us about him, his beliefs, the society he lived in and the way his story was received - amongst others. It's the believers who get hot and bothered by the 'reality' of the events.

Bennett represents the last gasp of what Peter Rogerson has identified as the old classics-educated, anti-scientific British attitude to UFOs (and the paranormal generally). Dismissive of the grammar- and comprehensive-school educated 'white-coated godlings of the laboratory' (to use the phrase coined by John Cleary Baker to belittle a group of Cambridge undergraduates who had set up a UFO study group in the 1960s) Bennett is the real representative of the school of ufology-as-literary-criticism.

FIREFLIES

dynamic pressure, and the X-15 UFO sighting

Curtis Peebles

Between late November and mid-December 2001, the UFO UpDates Internet mailing-list saw an exchange of postings regarding the UFO sighting made by Maj. Robert White on his July 17, 1962 flight in an X-15. This provides a case study of belief, the interactions between believers and sceptics, how evidence is presented, and how it is accepted or rejected.

Although there are similar exchanges on other UFO reports every day on the various news groups, what makes this example different is the availability of data from the X-15 flight itself. This includes the pre-flight plans, the transcripts of the in-flight radio messages and the post-flight debriefing,

as well as flight data such as the Mach numbers, altitudes, and dynamic pressure on the vehicle.

This, along with the historical context of the sighting, provides a benchmark against which the differing statements can be measured.

The thread began with a November 29, 2001 posting by James Oberg, which objected to a reference to the X-15 sighting in *Filer's Files* 16 from April 1999. George Filer had said that the object was greyish in colour and 30 to 40 feet away, but did not mention that the object was tumbling and looked like a piece of paper.

[1] Oberg commented that "engineers postulated he was seeing ice

flaking off the engine nozzle, super-cooled by the liquid oxygen propellant and broken loose by the firings of the X-15's attitude control thrusters once it was in space. This explanation came to satisfy everybody in the X-15 program, especially in hindsight when nearby tumbling ice flakes became a common sight on orbital missions." [2]

Don Ledger made the initial reply to Oberg's posting by saying, "Flakes of ice in the vacuum of space I can buy into but not within the atmosphere at supersonic speeds - and thirty to forty feet away tumbling in front of the pressure wave - which incidentally should be well aft of the X-15. That's one strong piece of ice flake. NASA et al seem to be getting away with the ice flake explanation for a lot of sightings and to be honest-I think it's getting a bit old." [3] This issue, the dynamic pressure on the X-15 at the time of the sighting, became central to the subsequent debate the following day, November 30.

The issue was taken up by David Rudiak, who had been critical of Oberg's earlier postings. Rudiak wrote that, "White reached an altitude of about 60 miles travelling about 4,000 mph. I don't know at what point in his trip he sighted the object. Let's assume it was at his maximum altitude of 60 miles. There's not much atmosphere up there, but it's also not a true vacuum. Meteorites made of rock and metal, not to mention satellites, start burning up at this altitude, but not this flat, fragile, completely non-aerodynamic 'ice



flake. "Yeah right!" He continued, "Furthermore, besides this flat 'ice flake' being impervious to vaporisation by frictional heat, it was also immune to frictional drag. After breaking off the engine in the rear, it somehow migrated forward to be seen tumbling outside of White's side porthole."

Rudiak then turned sarcastic, writing, "It's truly amazing what 'ice flakes' are capable of doing in the imagination of a debunker. The physical properties of such 'ice flakes' are so remarkable, I'm surprised NASA doesn't make our spacecraft out of them. Why use metals and ceramics when we could use 'ice flake' skins, thus eliminating frictional drag and re-entry problems, all with one simple, inexpensive material?" He concluded by saying, "I don't know what it was either and am likewise open to reasonable suggestions. But 'ice flakes' strike me as physically impossible under the given circumstances." [4]

Lan Fleming, a supporter of the face on Mars, took a different tack. Based on data from a French space web site, he noted, "White's X-15 flight in July of 1962 reached an altitude of 96 kilometres, which technically at least, qualifies as a space flight. There is probably still some atmospheric drag at that altitude, but probably not enough to prevent ice particles from 'hovering' near the plane for some time rather than being swept away quickly." He then raised a different issue, noting, "I do wonder, however, where the water vapour that could form such ice particles came from. If there's little air at an altitude of 96 km, then there also isn't much water vapour in that rarefied air that could condense into ice particles. X-15 flights were very brief, so I would think waste water was not being dumped overboard, eliminating another possible source of ice. The ice would probably have to have formed while the plane was at lower altitudes. But this plane was moving at hypersonic speeds which generate enough friction at lower altitudes to require the plane's skin to be constructed from heat resistant alloys. How does atmospheric water condense into ice on such a hot surface?" [5]

There was a series of postings on December 1. Rudiak sent a long and critical response, which centred on the issue of dy-

namic pressure. After noting that White's flight reached 60 miles altitude, he continued:

"Is 60 miles up considered 'space'? No, and furthermore Oberg knows it. If it were 'space,' then NASA would be conducting its orbital space missions there -- save a helluva lot of energy, for one thing, boosting objects into orbit.

"Why doesn't the space shuttle or the international space station fly only 60 miles up? Too much residual air friction, that's why. In fact, the unshielded space station would start burning up and dragged out of orbit in no time, just like meteors start burning up at 60 to 70 miles altitude..."

"At sea level, standard pressure is 760 mm of mercury. For every 10 miles increase in altitude, air pressure falls by a little over one order of magnitude. At 60 miles, the pressure has dropped nearly 10 million times.

"While that might count as a near vacuum in a lab on Earth, that's not the way an object travelling thousands of miles per hour experiences it. There is still significant frictional drag and heating, even for a streamlined, metallic craft designed to travel at hypersonic speeds like the X-15. 60 miles is still considered to be within the Earth's atmosphere and, even though very rarefied, is not space. Some people might call it the 'edge of space.'

"Enter Oberg's paper-thin, 'ice flake' that supposedly broke off a rear nozzle, then floated forward, and tumbled outside Bob White's X-15 window. What chance does an ice flake have of surviving in such an environment (60 miles up, travelling about 4000 mph) and doing the things that Oberg claims it could do? About as much chance as the proverbial snowball in hell!

"In the real world, a thin, non-aerodynamic sheet of ice like that would have been dragged backward and disintegrated almost instantaneously.

"Instead of dealing with the science and FACTS, Oberg has to resort to ridicule. You see, it's not his explanation that's ridiculous, it's those ufologists who don't have enough sense to recognise a true, prosaic explanation, even though it's scientifically impossible under the actual conditions of the sighting (which Oberg won't even acknowledge)."

Rudiak concluded by saying, "In Oberg's response, we find two Klassic staples of debunking technique:

1. Any 'explanation,' no matter how stupid or impossible, is preferable to none.
2. Even if a valid objection is raised to the aforementioned 'explanation' never admit error. Instead evade, stonewall, ridicule, obfuscate, whatever, such as 'Do you have any evidence he wasn't in space' or 'Oh, what do you expect of Ufologists--they just never accept a true, prosaic explanation.'" [6]

Ledger made two postings, the first of which brought the issue of a cover-up into the debate. He said, "White's strained remark about that there are 'things' out there seems to be one of those guarded remarks made by someone who has been told ahead of time to not use certain terms over an un-protected radio source. I'm sure that when White saw this 'thing' that his knowledge of his own environment, aerodynamics and possibly a fair grounding in physics, would have ruled out a prosaic explanation of the event..." [7] In a second posting, sent soon afterwards, Ledger returned to the dynamic pressure issue, saying, "You would have thought that more consideration would have been given to what this was since it was in close proximity to a vehicle motoring along at 4,000 mph. A sparrow impacting the leading edge of a wing [or windshield] on a light aircraft travelling at only 130 knots can lead to disaster. It always amazes me how these reports get blown-off by the bevy of high priced talent associated with each individual project. Or does it?" [8]

Fleming also made a posting on the issue of dynamic pressure. He wrote that the atmospheric pressure at 60 miles might "actually be about 10 times higher" than what Rudiak had calculated. Based on a speed of Mach 5.45, or about 3,500 miles per hour, he wrote, "The pressure that blowing air exerts on a stationary object is the air density times the square of wind velocity. So the pressure exerted by air 60 miles up against an object travelling at 3,500 mph is equivalent to the pressure exerted by a wind blowing at 14 miles per hour at sea level air pressure." He added,

Notes

1. Filer's Files #16 1999, archived at virtuallystrange.net/ufu/updates under the date April 24, 1999. The e-mail listed regarding this thread are also archived at this URL, on the dates and with the forwarding times listed.
2. Re: Filer's Files #48 - 2001 Oberg (November 29, 16:28:55).
3. Re: Filer's Files #48 - 2001 Ledger (November 29, 23:59:07).
4. Re: Filer's Files #48 - 2001 Rudiak (November 30, 22:34:27).
5. Re: Filer's Files #48 - 2001 Fleming (November 30, 22:47:17).
6. Re: Filer's Files #48 - 2001 Rudiak (December 1, 02:51:47).
7. Re: Filer's Files #48 - 2001 Ledger (December 1, 10:53:40).
8. Re: Filer's Files #48 - 2001 Ledger (December 1, 11:08:22).
9. Re: Filer's Files #48 - 2001 Fleming (December 1, 15:50:32).
10. Re: Filer's Files #48 - 2001 Oberg (December 2, 10:11:44).
11. Re: Filer's Files #48 - 2001 Oberg (December 2, 10:18:04).
12. Re: Filer's Files #48 - 2001 Oberg (December 2, 10:17:57).
13. Re: Filer's Files #48 - 2001 Oberg (December 2, 14:29:27).
14. Re: Filer's Files #48 - 2001 Oberg (December 2, 10:21:50).
15. Misunderstanding The X-15 Ersatz-UFO Controversy Oberg (December 2, 10:32:06).
16. Re: Filer's Files #48 - 2001 Fleming (December 2, 14:29:25).
17. Re: Misunderstanding The X-15 Ersatz-UFO Rudiak (December 3, 06:52:05).

"That seems too high to allow a flake of ice to appear to hover rather than being swept away, but a more substantial chunk of ice still might hover near the aircraft for a substantial period of time." He continued to doubt that there would be water to form such flakes, and wrote, "It does seem that the standard ice particle explanation used to explain away all alleged space shuttle UFOs is being forced to fit a very different situation." [9]

These postings, in turn, led to a number of replies by Oberg on December 2. Of these, two addressed Rudiak's objections. The first, regarding his comment about spacecraft with "ice flake skins," Oberg suggested that Rudiak "spend more time reading reality-based books and articles about real aerodynamics and space operations," rather than "be so overwhelmed by reality-free imaginations." Oberg noted that the reason meteors are incandescent at 60 miles was due to their high speeds, which he said were around 10 to 20 miles per second. He continued, "The X-15 at its high point is moving at most only a few hundred feet per second." Oberg concluded by writing, "The fix for this is for you to learn more about the subject, not make fun of ideas you can't seem to understand." [10] Regarding a second comment by Rudiak, on the ice flake disintegrating under the high dynamic pressure and temperature, Oberg repeated his comment that the X-15 was travelling at only a few hundred miles per hour. [11]

Concerning Fleming's doubts about ice forming at high altitude during the X-15's flight, Oberg noted, "Both around the cryo tanks and the super-cold propellant lines, ice always formed while the X-15 was on the carrier plane. Atmospheric condensation at those altitudes was common. Once out of the atmosphere, different kinds of jets were fired to point the X-15. They also could have effects on things tucked away in the aft end, for example." [12] Oberg also said that Fleming's calculations of a 14 mile per hour equivalent wind speed on the X-15 were based on wrong assumptions about the initial conditions. [13]

Oberg sent a reply to Ledger as well, about the issue of the ice flake drifting in front of the X-15. Oberg noted, "Actually,

once exo-atmospheric, the X-15 itself points itself in any random direction using wing-mounted jets. It can do this to point instruments, or for sightseeing, and ultimately to line itself up for re-entry. During this time, even something flaking off its back end can easily wind up in front of the cockpit window as the spacecraft rotates." [14] Oberg concluded by sending an e-mail which listed a number of Internet sites and quotations regarding the X-15. In this posting, he said, "...speeds on such missions reached 3,600 mph. Since engine cut-off was about 25 miles, with a vertical rate of 3,600 mph, you can see how at a 32 ft per sec per sec deceleration, the upward fall lasts about 150 seconds and traverses 40 miles straight up. All the way, it's a ballistic regime and anything coming off the vehicle travels along with it over the arc and back down." [15]

The believers were quick to challenge Oberg's statements on the X-15's speed, flight path, and manoeuvres. Fleming, for instance, noted on December 2, "You seem to be assuming that on its high-altitude flights, the X-15 was going straight up and then fell straight down, with almost no velocity relative to the ground at the high point of its trajectory." He continued, "I assumed instead that the plane probably was on a parabolic trajectory, maintaining a hypersonic speed at the highest point." Referring to a drawing of an X-15 flight which showed such a path, Fleming concluded "...then White's speed at the highest point in his trajectory, 60 miles up was 3,370 mph, perhaps a little lower due to frictional energy losses. The pressures would still be on the order of a wind blowing at more than 10 miles per hour at sea level. No ice flake is going to hover near the aircraft with those pressures acting on it." He also added, "These flights lasted less than five minutes, so if something hung around long enough for White to notice it, it must have been visible over a fairly wide range of altitudes. It might have been visible at lower altitudes where the air is denser, not just at the top of his trajectory while White was technically in space." [16]

Rudiak echoed these comments on a December 3 posting, saying, "This is very strange physics, Jimbo....According to

you, the X-15 had a vertical velocity equal to its total velocity, meaning it would have been travelling straight up!" He continued, "When you make ridiculous statements like this, it just further hurts your credibility as being an aerospace expert. Instead the term 'pelican science' starts to come to mind." Rudiak added that if the X-15 had been flying at only a few hundred feet per second, "...then Oberg's ice sheet hypothesis might be saved. The effective near-vacuum 'wind' at 60 miles would then be reduced by 2 or 3 orders of magnitude from the hypersonic velocities assumed by Lan Fleming and myself." He continued that "...such low velocities at peak altitude seem to be just more baloney from Jim Oberg, along with his 40



miles and 3,600 mph straight up," then added "...Oberg probably made up that low velocity figure, perhaps in an attempt to save his 'ice sheet' explanation."

Rudiak also addressed the questions of the X-15's manoeuvring, and the source of the ice. He noted that Oberg had failed to provide any evidence of extreme manoeuvres, and that it seemed unlikely that White would have manoeuvred very much, as he had to be correctly positioned for re-entry. Rudiak dismissed the possibility that ice formed on the liquid oxygen tank could have been the source of the object. He noted, "After engine burnout, the tanks would be empty. No more ice would form, particularly in the extremely arid conditions of these altitudes." [17]

Rudiak expanded on these comments with a December 5 posting. He said Oberg "...made statements about the X-15 that were so grossly erroneous, no real aerospace expert should ever have made them, no matter how rusty his memory may have been. They were more like embarrassingly erroneous. One wonders if he is

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even writing his own material anymore.” Rudiak continued with a list of what he called “...the bone-headed errors he (or his skill) made.” These included, Rudiak wrote, claiming that White’s flight reached a top speed of 3,600 miles per hour. “In reality,” he wrote, “it was Mach 6.04 or 4,070 mph, which I determined after only a few minutes search on the Net.” He concluded the listing by saying, “But look at his shoddy performance here: no facts, no science, just error on top of error, some of it no doubt deliberate, trying to bolster his shaky ‘ice crystal’ theory. He doesn’t sound like much of an expert at all nor someone obsessed with getting at the truth.”

In the same posting, Rudiak repeatedly raised the issue of dynamic pressure. In one case, he accused Oberg of “split hairs about this being ‘space’ and not in the atmosphere. Yes, this was a near-vacuum, but at the X-15 hypersonic speed, there was still significant friction and a breeze blowing. That’s a very important point, one Oberg tried to sweep under the rug, by talking of this being space’ and falsifying the actual velocity of the craft as being only hundreds of feet per second instead of thousands. The effective wind, though not strong, would be sufficient to rapidly sweep away any small, non-aerodynamic debris coming off the craft (which would limit any sighting of such debris to only a few seconds). It would probably also be sufficient to quickly break up any thin sheets of ice into smaller pieces.”

Rudiak suggested that paint chips or metal debris might hold together under such dynamic pressure, but that this, too would still have been blown away by the wind. He also noted that, “The complete tape of Bob White’s flight along with data about the craft when this was all happening (where exactly was it, how was it oriented, and exactly how fast was it going) are all important pieces of information, none of it provided to the royal us.” Rudiak concluded that, “Oberg has basically been caught with his pants down, but he will never admit that he totally screwed up if not deliberately and seriously misrepresented the actual situation....He’s like the school bully copying the class nerd’s quiz, then beating him up later for not getting all the answers right.

Do your own damn work, Jimbo.” [18]

Oberg contacted the Edwards AFB History Office, and Dr. Ray Puffer supplied him with the transcript of White’s post-flight debrief. The section of the December 6 posting dealing with the sighting is as follows:

“After engine shutdown I engaged angle of attack hold at 6 degrees alpha, and I seemed to hold this all right. It wasn’t long after I went through 220,000 that I disengaged angle of attack hold and just continued on over the top. It seemed like a hell of a long time to get over the top.... While I was level I started noticing some things and I said, ‘Now wait a minute they must be inside the cockpit,’ but they were outside the cockpit. It looked like perhaps it might have been residue or frost or very small little things going by. I was paying attention and focusing on what these things might have been, and one time a piece of something about the size of my hand, which looked like a piece of paper, went past just going along with the airplane. It was there, there was no question about it.”

Q: “Do you think it was frost?”

A: “This thing looked too big for that. It looked like a piece of paper, almost the size of your hand.”

Q: “Whereabouts in relation to the airplane?”

A: “Just off to the left side, right on the window level. The other ones were out on the right side, little somethings but I couldn’t distinguish what they were. There was no question about it.”

Q: “Did it come from the nose perhaps?”

A: “Well, I thought the other small ones came from the nose, but this other one just stayed there. Okay, going ahead now, my inertial indicator went above 300,000 ft., but I don’t know how high I got. This looked like I was quite a bit higher than the last flight because I could just look out and -- you know what the pictures look like when the guy is flying in orbit, well that’s what it looked like.” [19]

Rudiak replied a few hours later, again stressing the effects of dynamic pressure. He remarked, “The ‘little things,’ assuming they were debris off the nose, I assume would drift along the stream lines and pass within inches of the cockpit windows, which sounds

like what White is describing. But how did this other flat thingee get way out there, even if it came off the nose? It should drift right past the windows along with the little things.”

After noting White’s comment that the paper-sized object seemed too big to be frost, Rudiak wrote, “So why did Oberg claim this was ice? White realised it couldn’t be ice. Furthermore, remember Oberg’s song and dance about this was ice formed from the rearward liquid oxygen tank or fuel lines? Obviously even if ice had survived and then later dislodged, it can’t move forward, one of the major objections to the ice theory from the beginning by the gullible UFO believers.”

Rudiak did not limit his critical comments to Oberg. He had gone to the Edwards AFB History Office three years before to research several reported UFO incidents at the base, and met with Dr. Puffer. Rudiak wrote, “Puffer, like Oberg, is a knee-jerk UFO debunker who loves to laugh at the gullible UFO buffs.” The base logs had no mention of the incidents, as Dr. Puffer had told him beforehand. Rudiak concluded that this showed, “absence of evidence is not evidence of absence.” in that sensitive information would not be mentioned in logs, but be handled through other channels. [20]

As the exchanges with Rudiak were going on, Oberg called Bill Dana, a former X-15 pilot and the retired chief engineer at the NASA Dryden Flight Research Centre. Oberg wrote that “He recalled White’s story well. Bob was concerned, at first, he thought he was ‘flying through a field of these objects going by his window,’ he told me. Turned out, it was ice coming off something -- an APU exhaust, I recall, or some cryogenic transporter.” [21]

This, in turn, led to a series of exchanges with Fleming which overlapped the postings by Rudiak. Fleming’s first reply raised the issue of a cover-up. He wrote, “Maybe too much time passed between when Duran [sic] was a test pilot and when he was a NASA bureaucrat. His ‘recollection’ sounds more like the spin-doctoring of the latter rather than the plain-talking expected from the former.” Fleming again raised the issue of where the ice might have come from. “Guessing that the acronym APU means attitude pro-

18. Re: Misunderstanding The X-15 Ersatz-UFO - Rudiak (December 5, 00:27:17).

19. Re: More On The X-15 - Oberg (December 6, 08:58:34). “Angle of attack,” also called “alpha,” refers to the angle between the airflow and the wing. This measurement is independent of an aircraft’s climb angle. White’s climb angle was 41 degrees (measured relative to the horizon), while the X-15’s angle of attack was 6 degrees (measured relative to the airflow). “Alpha hold” refers to a feature on X-15 #3’s MH-96 adaptive flight control system. The pilot could set the angle of attack, as well as the pitch, yaw and roll, and the system would automatically hold it.

20. Re: More On The X-15 - Rudiak (December 6, 16:30:46).

21. Re: More On The X-15 - Oberg (December 5, 00:15:48).

22. Re: More On The X-15 - Fleming (December 5 13:29:55)

23. Re: More On The X-15 - Oberg (December 6, 15:53:47).

24. Re: More On The X-15 - Fleming (December 6, 16:16:26).

pellant unit or something similar," he noted that the X-15's thruster rockets used hydrogen peroxide. Fleming continued that they "emitted superheated steam as the exhaust product. It seems unlikely to me that steam would freeze into ice flakes under near-vacuum conditions on surfaces that had been heated to over 1,000 degrees centigrade during passage through the lower atmosphere only seconds before." He added, "Anything that White saw 'going by his window' was moving from the nose toward the tail, and it is not at all likely to have been ice flakes." [22]

Oberg replied to Fleming's comments within a few hours. He wrote, "I'm disappointed with your readiness to reject the firsthand comments of people who were right there, with vague allegations of 'spin-doctoring', a suggestion of deliberate fraud." Oberg also noted that "APU" actually stood for "Auxiliary Power Unit." The three APUs on the shuttle burn hydrazine to move the control surfaces and the main engines. He added, that "Water vapour is a by-product," then continued, "Both water and hydrazine freeze readily in space because of robust evaporative cooling, despite sunlight or structural temperatures." Oberg also added that the X-15's thrusters also emitted water as a by-product. [23]

Fleming reiterated his conclusion that neither the X-15's thruster rockets nor its APUs could have produced ice. He wrote, "Since the APUs used extremely hot hydrogen peroxide as fuel, it seems unlikely that their exhaust could be a source of ice for the same reason that the thrusters seem to be an unlikely source of ice. In any case, the APUs were positioned behind the cockpit and ice from that location wouldn't have got in front of the cockpit." [24]

In another follow-on posting, Fleming also defended his comments about Dana, saying, "Spin-doctoring isn't fraud. If it was, they'd have to build more prisons to hold all the bureaucrats and politicians who do it. Dana (sorry about getting the name wrong), said that the object White observed turned out to be ice, giving the impression he's talking about the results of some investigation, but without exactly saying it. It could not have turned out to

be ice because that simply doesn't make sense." He concluded that, "Given White's obvious excitement over his observation, it's odd that it seems to have aroused so little interest among project scientists." [25]

On December 8, Fleming sent a posting on his calculations on how an object would behave under the assumed dynamic pressure. He wrote, "If the object was about 7 inches long in the direction of the wind and had a density of around 3g/cc (like some paints) it could have been moved about 2 feet in 5 seconds and 8 feet in 10 seconds by wind pressures equivalent to those of a 10 mph wind at sea level." Such a speed, Fleming concluded, meant the object would be out of sight from the X-15 in 30 seconds, and its movements would have been easily visible to White from 40 feet away. Fleming concluded they would probably never know what the object was, as "The documentation of any conclusions about the nature of the object reached by X-15 project scientists seems to have gone down the rabbit hole." [26]

The December 8, 2001 postings marked the effective end of the debate over the X-15 sighting. Personal attacks were made on Oberg for the next week, but these contributed nothing to the question of what had happened on the flight. Ironically, despite the many thousands of words exchanged over the key point in the debate, this was never settled. What exactly was the dynamic pressure on the X-15 at the time of the sighting? To answer this question, we must look at the historical background, and the flight data.

The historical background to Major White's X-15 sighting began nearly five months before. On February 20, 1962, John Glenn was launched on the first US. orbital spaceflight. As his Mercury spacecraft went from the night side of the Earth into daylight on its first orbit, Glenn noticed thousands of very small, luminous particles swirling around the spacecraft. They were moving slowly, at a speed Glenn estimated to be 3 to 5 miles per hour from ahead of the spacecraft, but he did not think they were originating from it. As the Sun rose, the objects became harder to see. Because of their yellow-green colour, Glenn called

them "fireflies." [27]

Some thought they were a natural phenomenon of the upper atmosphere, while others believed the fireflies were paint chips or ice from the Mercury spacecraft. The Soviets soon announced that the second Soviet cosmonaut, Gherman Titov, had also seen fireflies during his August 1961 spaceflight. Titov said that he first noticed them from his booster rocket, and later from the retro rockets. The Soviets dubbed them the "Glenn effect."

The third firefly sighting was made on April 30, 1962, during an X-15 flight by NASA research pilot Joe Walker, which reached an altitude of 246,700 feet. After the X-15 landed, film from an aft-facing camera showed



Major Robert White and his son

several fireflies. They were described by a NASA spokesman as "barbell shaped, bright-orange in colour, and passing in groups up to six behind the X-15." Opinion ranged from "definitely something up there," to "film spots," to "sun rays on the lens." The Walker X-15 sighting was publicised at the National Conference on Peaceful Uses of Space, held in Seattle on May 10, 1962. When asked at the meeting about the sighting, Walker replied, "I don't feel like speculating about the nature of these objects. All I know is what

appeared on the film in later study. I saw nothing myself during the flight of this nature. From what we can tell, they seem to be disk shaped, or perhaps even cylindrical. But it's impossible to estimate their size or their distance from the camera." Soon afterwards, Paul Bikle, the director of the NASA Flight Research Centre (now the NASA Dryden Flight Research Centre), said, "It was either paint, or frost, peeling from the fuselage and going back." [28]

Soon afterwards, on May 24, 1962, Scott Carpenter was launched into orbit aboard a Mercury spacecraft. During his three-orbit flight, he also saw fireflies during each sunrise. To Carpenter, the objects looked more like snowflakes than fireflies, and did not seem luminous. They also came in a wide range of sizes, brightness, and colors. Some were white, some were gray, and one looked like a helical shaving from a lathe. They seemed to be moving at different speeds, but were not moving out and away from the spacecraft. At dawn on his third orbit, Carpenter was reaching for an instrument when his gloved hand bumped against the capsule's hatch. A shower of fireflies then drifted past his window. A second tap on the hatch produced another group, as did a third tap on the wall. The outer skin of the Mercury spacecraft was covered with ice from the water cooling system and/or the hydrogen peroxide jets. This, and not some high-altitude natural phenomenon, was the cause of the fireflies. [29]

Overshadowed by the Mercury orbital flights, the X-15 program continued to fly at higher speeds and altitudes. Walker's April 30 flight had set a new world altitude record, while Maj. Robert White had become the first man to fly Mach 4, 5, and 6 in a winged aircraft. In early July 1962, White was preparing to set a new altitude record of over 50 miles. The seventh flight of X-15 #3 was planned to have an engine burn time of 80 seconds, which would accelerate it to 5,150 feet per second. This was sufficient for the X-15 to reach a peak altitude of 282,000 feet, at which time it would have slowed to a speed of 4,200 feet per second. The goal of the flight was to make the second test of the MH-96 flight control system. [30] The first three attempts to make the flight had to be

aborted after the B-52 took off, due to technical problems. Another attempt was cancelled before takeoff on July 14, due to a request by the Atomic Energy Commission. They were conducting a low-yield nuclear test at Yucca Flat, code-named Small Boy. Not until July 17 was everything ready. [31]

The X-15 was launched from the B-52 at 9:31 a.m., at an altitude of 45,000 feet over Delamar dry lake in Nevada. White successfully ignited the rocket engine, and the X-15 accelerated in nearly level flight. After 30 seconds, the X-15 had reached a speed of Mach 2.1, but it was flying at only about 43,000 feet, rather than the planned 53,000 feet. Due to its high speed and lower-than-planned altitude, the maximum dynamic pressure (also called max q) reached about 850 pounds per square foot (psf). White then pitched the X-15 up, establishing a 41 degree climb angle, and engaged the MH-96 pitch hold. The X-15 accelerated upwards, but as it did so, the dynamic pressure dropped rapidly as the air became thinner.

The engine shut down after an 82 second burn (two seconds longer than planned), at a speed of Mach 5.2. The X-15's altitude was 159,000 feet, but the dynamic pressure on the vehicle had dropped to below 40 psf. White said later at the debrief that he shut the engine down manually, although the log for engine #103 lists a burnout due to fuel exhaustion. In either case, there still was residual liquid oxygen and liquid anhydrous ammonia in the X-15's tanks. White abruptly went from a 4 G acceleration to being weightless at engine shutdown. The residual propellant was also weightless, and floated in the tanks. After burnout, White engaged the MH-96's alpha hold, and the X-15

NASA 1: "You're going higher by our plot than anticipated and this is putting you farther down range."

White: "Ventral is engaged, speed brakes coming open."

NASA 1: "OK, looks like you're about the peak and speed brakes out."

White: "Roger."

"There's a lot of things out there."

"Absolutely is!"

"What's my angle of attack?"

NASA 1: "We don't have any better presentation than he does."

We're coming back down through, approaching 285. Anticipate a position in correction turn to the right whenever you have the ability to do so."

White: "Roger.absolutely.....the view."

NASA 1: "We're still not getting much on angle of attack."

White: "OK, it's going to start going back, here we go." [33]

The X-15's speed as it reached the peak altitude was about Mach 4.8 (4,500 feet per second). As the X-15 began its descent, its speed again began to increase. The vehicle did not show measurable dynamic pressure until it had descended to about 270,000 feet. To the X-15 program engineers, during this two minute period, the vehicle had experienced zero psf dynamic pressure. The onboard instrumentation was not sufficiently accurate to measure the minute pressure from the residual traces of atmosphere. Nor was any effort made to calculate the dynamic pressure, as it had no importance for the research goals of the flight.

Using atmospheric density tables, it is possible to calculate that the dynamic pressure on the X-15 at maximum altitude was about .02 psf. Variations in atmospheric temperature and density would change this by no more than 30%. (The value would therefore range, at most, from .014 to .026 psf.) The dynamic pressure of a 10 mile per hour wind at sea level is .256 psf. This is at least 10 times greater than the dynamic pressure actually experienced by the X-15 at 314,750 feet. Simply put, the air was too thin, and the X-15 was flying too slowly for there to be meaningful dynamic pressure. An ice flake would not be immediately incinerated or broken up, but rather would remain intact. A low density ice flake would be affected more by the fractional dynamic pressure than the more massive X-15. The relative motion for an ice flake would be just under 3 miles per hour at most. This is much smaller than had been calculated using the 10 miles per hour assumed wind speed. An ice flake would appear to White to be flying more or less along with the X-15, particularly as he had to remain focused on flying the vehicle. [34]

The X-15 was accelerated by the Earth's gravity as it

28. "X15 Film Shows Mysterious Objects," *Los Angeles Herald-Examiner* May 11, 1962, and "Just What Was It X-15 Photographed Way Up There?," *Desert Wings*, May 18, 1962. Edwards AFB History Office X-15 newspaper file.

29. Swenson, et al, *This New Ocean*, p 452, 453.

30. X-15 Flight Request Flight No. 3-7-13, X-15 Flight Data Flights 3-1 to 3-15, Dryden History Office. None of the documents related to the flight were ever classified.

31. Flight Research Center 1962 Daily Diary, Dryden History Office file # L3-10-1A-6.

32. X-15 Flight Request, Time history of Mach number, altitude, and dynamic pressure based on radar data for flight 3-7-14, and Beatty radar tracking plot, X-15 Flight Data Flights 3-1 to 3-15, Dryden History Office, and X-15 Research Airplane Flight Record, Dryden History Office file # L1-6-9B-12.

33. "Altitude Record Flight" pilot transcript, X-15 Flight Data Flights 3-1 to 3-15, Dryden History Office. A segment of this was also posted in Re: More On The X-15 - Oberg (December 7, 09:20:18).

34. All calculations of dynamic pressure were done by Dr. Kenneth W. Iliff, who was an X-15 research engineer



fell, and as a result, it actually reached its highest speed during the descent -- Mach 5.45 at about 120,000 feet. This was equivalent to 3,757 mph, or 5,510 feet per second. During the re-entry, an angle of attack of 20 degrees was maintained, followed by a 5 G pullout. The dynamic pressure also increased as the X-15 descended into thicker air. Max q during the descent reached 1,186 psf, at an altitude of 65,000 feet and a speed of just over Mach 3.7. White glided back to a successful landing at Rogers dry lake. The flight had only taken 10 minutes and 20.7 seconds. [35]

As a result of the new altitude record, Major White was awarded astronaut wings. Air Force regulations then defined "space" as beginning at an altitude of 50 statute miles (264,000 feet). It was not necessary to go into orbit to be considered an astronaut. [36] There were thirteen such space flights made during the X-15 program. A total of eight X-15 pilots exceeded 50 miles; Maj. Robert White (1 flight), Joe Walker (3 flights), Maj. Robert Rushworth (1 flight), Capt. Joe Engle (3 flights), Jack McKay (1 flight), Bill Dana (2 flights), Maj. Pete Knight (1 flight), and Capt. Mike Adams (1 flight). NASA research pilots Walker, McKay, and Dana, being civilians, were not eligible for astronaut wings. [37]

Press attention soon focused on the flight. In its July 27, 1962 issue, Time magazine carried an article on the X-15 program. This included the statement, "But for White and his fellow X-15 pilots, the greatest reward for their work is the satisfaction of probing the mysteries inside the sky. In last week's flight Bob White found a new mystery for scientists to puzzle over: through the X-15's thick left quartz window, he saw a strange sight: There ARE things out there," he radioed enthusiastically over his voice radio. There absolutely is." The article continued that it was a slowly tumbling hand-sized object, that Major White thought it was about 30 to 40 feet away, greyish in colour, and that he had no idea what it was. [38]

This was followed in early August, when a group of newspaper reporters was brought to Edwards AFB to see the various research activities, including an X-15 flight. They interviewed

White about the sighting, and saw a film of the object from a camera aboard the X-15. United Press International reporter Douglas Diltz wrote that, "A possibility the X-15 encountered strange phenomena in space arose today with scientists unable to identify a mysterious object...." He quoted a scientist as saying, "It is impossible to explain the object's presence at this time. As a matter of fact, we aren't even sure what White saw and the camera photographed were two different objects." Diltz wrote that the film showed "an object that darted above and behind the plane." [39]

Another reporter on the trip was James Goodloe, a staff writer with the Birmingham (Alabama) Post Herald. In his article, Goodloe wrote, "White said the object moved gradually toward the rear on the left and was about 30 to 40 feet from the plane. He said he doesn't know what it was but he said he doesn't attach any particular significance to it." The article also had a photo taken from the X-15 film. It showed an irregular white object against a black sky, as it tumbled above and behind the X-15. [40]

Although it is a subjective impression, none of the news articles seemed to "hype" the sighting, but rather used it to give colour to the story. Diltz also talked about Maj. Robert Rushworth's low speed/low altitude X-15 flight on August 9th, while Goodloe wrote about the use of F-104 aircraft for landing practice, and described the X-15's design and shape. The Time magazine article did not use the term "fireflies," but this seemed to be context of the sighting. None of the articles indicate the object was anything more than a natural phenomenon.

The records also do not indicate that either Major White or any of the X-15 personnel attached any importance to the sighting. Major White's comments about the sighting amounted to half a page of text in a six page report. Although the term "fireflies" was not used in the report, the question asking if White thought the object was frost indicates this is what the engineers were thinking. Although White did not think it was frost, John Glenn also thought the same way. Major White's report was a detailed description of the X-15's and MH-96's behaviour during the

flight. He talked about the angle of attack and sideslip measurements becoming inaccurate at high altitude, the view outside the windows, a yaw oscillation he experienced during re-entry, his assessment that if the stability augmentation system (SAS) failed at high altitude, "You can toss in the towel," the pain in his arm during re-entry due to its cramped position, his concerns about overshooting the lake bed, his comparison of the SAS and MH-96 systems, the difficulty of holding a heading at peak altitude, and similar operational issues. [41]

The X-15 program was a fast-paced effort, with several flights being planned at the same time. It was necessary to quickly analyse the flight data, identify any potential dangers, and incorporate the data into later flights. This was a difficult, time consuming task with only slide rules and mechanical calculators. The yaw oscillation during White's re-entry was deemed a concern, and plans were made for a later X-15 flight to check this out. The sighting itself was a curiosity which did not affect the research program. UFO believers were interested, however, and the X-15 sighting was soon incorporated into the belief system. The August-September 1962 issue of *The UFO Investigator*, the newsletter of the National Investigations Committee on Aerial Phenomena (NICAP), carried a short article on Major White's sighting titled, "AF Criticizes NASA Release of Mystery Object Photo." It quoted a letter to a NICAP member from Maj. Carl R. Hart, who was described as the "AF official UFO spokesman." Major Hart said, "As usual, NASA has gone out on a limb on this," and added, "The news story was the first intimation the AF had of the problem." The article stated that NASA scientists "frankly admitted" that they "could not explain the object or its presence in space." The release of the photo was described as following a three-week investigation and "questioning" of Major White. [42]

Both X-15 sightings, the initial one on Walker's April 30 mission and Major White's sighting, were mentioned in NICAP's 1964 report, *The UFO Evidence*, Major White's sighting was described as being of an object "like a piece of paper" which followed

35. Time history of Mach number, altitude, and dynamic pressure based on radar data for flight 3-7-14, and X-15 Research Airplane Flight Record, Dryden History Office.

36. Dennis R. Jenkins, *Hypersonics Before the Shuttle A Concise History of the X-15 Research Airplane* (NASA 2000), p 61, 62, 117.

37. Tim Fumiss, *Manned Spaceflight Log* New edition (London: Janes 1986) p 15-16, 20, 23-25, 31, 33-34, 43, 46-48, and Robert Godwin, X-15 *The NASA Mission Reports* (Burlington, Canada: Apogee Books, 2000), 392. Maj. Mike Adams' astronaut wings were awarded posthumously. During the ascent on his November 15, 1967 flight, an electrical problem and vertigo distracted Adams. As X-15 #3 (the same vehicle Major White had flown) reached its peak altitude of 266,000 feet, its nose was pointed 15 degrees to the right. With no significant dynamic pressure on the vehicle, the X-15 continued to follow a ballistic trajectory, and there was no change in the flight path. Apparently due to the vertigo, Adams mistook a roll indicator for a sideslip (heading) indicator, and turned the X-15 farther to the right until it was 90 degrees to the flight path. It was re-entering the atmosphere sideways. At 230,000 feet, and a speed of Mach 5, the dynamic pressure had increased, and the X-15 went into a flat spin. This continued for 43 seconds, at which time the X-15 was at an altitude of 120,000 feet and going Mach 4.7. Some combination of pilot action, aircraft stability and the MH-96 control system caused the X-15 to recover from the spin. Tragically, the X-15 immediately began a pitch oscillation (nose up and down). The MH-96 system was saturated, making the pitch oscillation self-sustaining and increasing in severity. The X-15 was descending at 160,000 feet per minute and dynamic pressure was increasing at a rate of nearly 100 psf per second. The g-forces increased to +/- 15 Gs, and, at an altitude above 60,000 feet, the X-15 broke up. Maj. Mike Adams was killed in the crash.

38. Re: Filer's Files #48 - 2001 Oberg (November 29, 16:28:55)

39. Douglas Diltz "X15 Sky Mystery Grows," *Los Angeles Herald-Examiner* (August 9, 1962) Edwards AFB History Office X-15 newspaper file.

40. James Goodloe, "To X-15 Pilot Space Object Still Resembles Paper," *Birmingham Post Herald* (August 10, 1962) Edwards AFB History Office X-15 newspaper file.

41. "Altitude Record Flight" pilot transcript, X-15 Flight Data Flights 3-1 to 3-15, Dryden History Office.

42. "AF Criticizes Release Of Mystery Object Photo," *The UFO Investigator* (August-September 1962), p 8.

43. Richard H. Hall, editor, *The UFO Evidence* (New York: Barnes & Noble Books, 1997), p 139.

the X-15 for about 5 seconds, and which then "darted above and behind the plane." [43] The wording was the same as Diltz's newspaper story on White's sighting. The X-15 sighting would be mentioned from time to time over the next four decades, until the postings began on UFO UpDates in late November 2001.

As a case study in the interaction between believers and sceptics, several points can be made. The first has to do with evidence. The believers' estimate of the dynamic pressure on the X-15 was based on the rate at which atmospheric density drops as altitude increases. As a result, they calculated that the X-15 experienced the equivalent of a 10 to 15 miles per hour wind at sea level. As the postings continued, this estimate became accepted as fact. The believers argued that an ice flake would be quickly swept away and/or be destroyed. Since the object kept pace with the X-15, it had to be anomalous. The estimate they were drawing this conclusion from, however, was based on a rough rule of thumb, and the result was an order of magnitude or more in error. A related point is how evidence is accepted or rejected. The believers argued that no ice could survive the heat and vibration of the climb, that there were no sources of water to form new ice at high altitude, and no means to freeze it,

as the propellants had been completely used up. Oberg argued, based on his experience as a shuttle ground controller, that the hydrogen peroxide used by the thruster rockets and APUs produced water vapour, and that this would freeze in the vacuum conditions. This was rejected by the believers. An additional factor, not recognised by either side, was that even after burnout, there was still propellant in the X-15's tanks. In many photos of X-15 landings, frost can be seen on the underside of the vehicles. This formed during the approach despite the heating of reentry. Thus there was a means for water vapour to freeze.

A further point is that of research. The postings had to be responded to quickly. There was little time for extensive archival research, and there was a tendency to make "off the cuff" comments - examples of this being Oberg's statements about the X-15's low speed at peak altitude and its manoeuvres, and Rudiak's remarks about meteors burning up at 60 miles and the X-15 not being in space. Oberg contacted the Edwards AFB and Dryden History Offices. None of the other protagonists did so. The majority of the research was done on the web, which has significant weaknesses. Based on web data, Rudiak said that the X-15's top speed on the July 17, 1962 flight was Mach 6.04. This web data was in error,

as the fastest X-15 #3 ever flew was Mach 5.73. Fleming was correct in saying that the flight's top speed was actually Mach 5.45, but he had no way of knowing that this actually occurred during the descent, after the sighting, and not during the climb. The critical data, such as the transcripts and the flight data, were not available on the web.

The debate over the X-15 sighting also points out the central role, and usefulness, of the idea of a cover-up to believers. The issue entered the postings almost immediately, and remained throughout. It was used to explain away the lack of any evidence of an extraordinary event. It was used to explain away Dana's recollections about what had occurred. It was used to explain away the contradiction of a secret sighting of an alien spaceship being freely discussed with newspaper reporters. Finally, it was used to conclude that the truth about the sighting would never be known, as this had been hidden away beyond all chance of recovery by the all-powerful conspiracy and its legions of evil minions. Thus the belief system is preserved.

Curtis Peebles is the author of *Watch The Skies!*, a history of the beliefs about UFOs, and *Dark Eagles*, which covers the development of "Black aircraft," such as the U-2 and F-117.



**25
YEARS
AGO**

Not a brilliant issue of MUF0B twenty-five years ago. The lead article was by John Hamey, arguing 'The Case for Humanoids'. Contrary to popular belief - well *some* popular belief, Magonia has always be open to the argument that life forms may exist in other parts of the Universe. However, we suspect that the presumption that those life forms may have made their way to this part of the Universe is more a matter of faith than science. In this piece John made out a convincing case for suggesting that any life form capable of extraterrestrial travel is going to have considerable physical similarities to us.

This article is archived in Magonia Online, so it's worth re-reading it in conjunction with the recent articles on the same subject by Peter Brookesmith and Gareth Medway.

Ron Westrum completed his 'Knowing About UFOs' essay, in which he took a sociologists view of the way in which knowledge about UFOs circulates in society and within the small world of ufologists.

Willy Smith contributed a 'Schematic

Chart of Ufology' which looked like one of those terribly complicated flowcharts that pointy-haired bosses enthuse over at business conferences. Unfortunately, twenty-five years later its meaning is totally obscure. I do remember that it was incredibly difficult to have to lay out using rub-down Letraset.

INTCAT ploughed on, finishing 1954 with the enigmatic entry: "31 December 1954, Camaque, Brazil. Occupant report, no details as yet" Nor, I suspect, are there any now. Some notes from Peter Rogerson hinted that the complete INTCAT might be published in 1980. Hmmm.

In the book reviews, Peter took a pretty dim view of Randles and Stanway's *UFO Investigation: a field investigator's handbook*, suggesting that it pandered to ufologists who had "never got over their pre-adolescent interest in chemistry sets and toy telescopes." More to his liking was V-J Ballester Olmos's catalogue of 200 'type one' cases in Spain and Portugal. Here was one worthwhile catalogue which did get published - unlike INTCAT

ON DOWN-TO-EARTH UFO EXPERIENCES

is there a signal in the noise of the UFO experience, or does meaningfulness follow silently in its wake?

M.J. Graeber

While examining UFO reports over the last 30 years, I have come to realise that some UFO sightings and close encounter experiences have an extraordinarily symbolic relationship to the observer's psychical status at the time of their experience. This, by no means, is intended to imply that there is something drastically wrong with the witnesses - but, knowing something about their psychological make up at the time of their experience might afford us a better understanding of the human side of their UFO experience, and the impact that it has had upon the observer's life. This is of some importance to the objective UFO researcher because it offers him or her the opportunity to explore new avenues of investigation concerning these fleeting phantoms of the sky that we commonly call UFOs.

ONE SUCH avenue might be to consider UFOs as seemingly 'unintelligible imagery' rather than advanced technological marvels, and to pursue the notion that the *ambiguous imagery* can be deciphered by analysing the perception of it in much the same way as a therapist might analyse a patient's dreams. This is not meant to suggest that all UFO experiences are dreams or even waking dreams a fact which several ufologists (of both pro and con persuasions)

have more than adequately pointed out in the vast UFO literature.

But, in a previously published case study of a "Dynamic Display" type of UFO experience (The Raefield Affair, *UFO Universe Magazine*, spring 1997), I discussed the remarkable UFO encounter of a young man who observed four airborne oddities as he was driving to work in the early

morning hours of 26 August 1976. In that case, I explored the possibility that the UFOs were symbolic representations (or "a display") of his innermost personal "anxieties" and "conflicts" regarding his failing marriage. But, the Raefield encounter involved a UFO observation by a lone witness which, of course, brings us to the question of how in the world multiple witnesses could possibly be involved in a "Dynamic Display" which is also supposed to be rife with the same sort of "subjective symbolic meaningfulness" for each individual involved in the sighting.

In the examination of the "Bailey encounter", a UFO report that has never been published before (either here or abroad), I will attempt to explain how "self-perception/Dynamic Display" UFO experiences of this variety are possible for a small group of individuals.

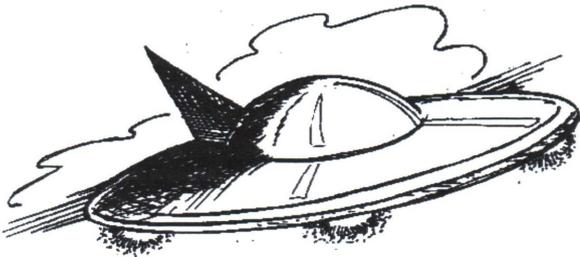
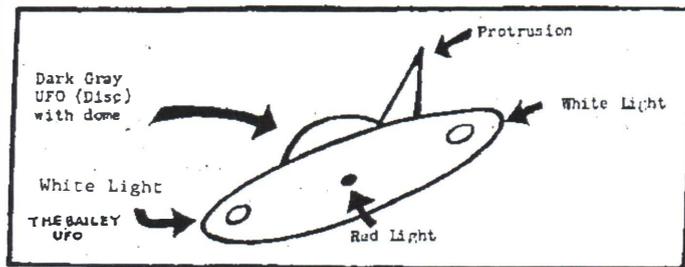
The Bailey Case: a moving night sky and I, the selected

This report was passed on to us by military personnel (the officer of the Guard) at Willow Grove Naval Air Installation in south-eastern Pennsylvania, at 2200 hr (10 p.m.), on the night of 17 November 1977. However, the actual time of the sighting was fixed at about 7.30 p.m. that evening; and, as it turned out, this was an important point for the investigator to know, for it was raining and completely overcast in the vicinity of the occurrence which was about eighteen miles away from the base. We contacted the primary witness (Mrs Bailey) by phone that

night (she was still very excited about the experience) and gathered some basic information before dispatching our field investigator to interview her. In all, three interviews took place during the course of the inquiry, which lasted two months. However, our contacts with her continued until mid-1979.

The Report

Mrs Bailey said that she had observed several strange lights in the sky when she first noticed the UFO. The initial light was yellow in colour, then seven appeared, or was it five? (She seemed a bit uncertain about this point.) Anyway, then one object came into view: it was a disc which was flying very low. In fact, it was so close that it



flew right over her car. The saucer was said to be grey in colour, it had a dome on top, and sported a white light on its leading and trailing edges. It also had a red light centrally affixed to its underside. According to Susan, Mrs Bailey's thirteen-year-old daughter who was also present during the event, the object had an inverted V-shaped protrusion situated on its topside's trailing edge. Apparently, Mrs Bailey did not see this protrusion because "the UFO flew on a kind of slant".

The four witnesses, Mrs Bailey (36), Susan, Betty (11), and Debbie (5), all agreed that the object made a humming sound, had several lights that blinked as it approached them, and that it also seemed to slow down somewhat just as it passed over the car. The total observation time was thought to be about one and one half min-

utes in duration with the UFO being positioned no more than one hundred feet overhead. Mrs Bailey guesses that its size was "something like seven or eight feet thick and about twenty feet long" (meaning, in diameter).

The initial investigation of the matter was handled by Mr Gordon Myers of UFORIC (the Philadelphia-based UFO Report and Information Center). His report concerning the witnesses' sincerity and his attempts to shake them from their story reads as follows:

"The people appear to be sincere about their sighting. The mother seemed to be still shook up about it, but did not seem to be afraid to talk about it. Her daughter, Susan, said very little but appeared to be interested in knowing exactly what they saw.

"After talking with them, and after all the data were obtained, I showed them the book with the pictures of the different UFO configurations in it. The mother first: she picked out P44, P21 (only upside down), and P13 (with the bottom removed):

"The daughter, Susan, picked out case 22 (but with no windows or triangular protrusions), also U16 and U102 except with an inverted "V" on top."

The references pertain to object configurations found in the Investigator's handbook - this method of determining what the object looked like is only used after the witnesses' sketches were gathered or if they were so artistically inept that such assistance was required.

"I tried to make them confused about the object's size, distance, and the experience in general, but could not change their stories."

After gathering all the information required for the investigative process employed at UFORIC (an investigative technique that involves a search for

both a physical and/or psychological basis for the event), we reached this tentative conclusion regarding the Bailey family's experience:

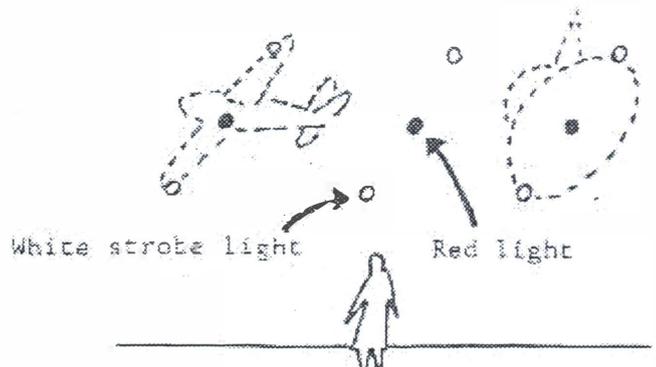
Investigative findings

The witnesses' description of the object's lighting pattern(s) and its characteristics of flight were not too far out of line to be considered as those being indicative of a small fixed-wing aircraft performing a banking (turning) manoeuvre. This seemed reasonable to suspect since Mrs Bailey and her daughters had agreed on the positioning of the object's lights and the fact that the UFO made a humming sound "something like a motor" as it passed over their car. The only really puzzling factor remaining was why they saw a fin-topped disc and not an aeroplane's outline.

We have encountered this type of misidentification many times before at the UFO Center and found that when the human eye fails to obtain a complete configuration for contemplation because of observational distances, darkness and/or restrictive atmospheric conditions, etc., the mind frequently fills in the missing pieces of the image with a *subjective outline*, or it may, less often, even create several UFOs from a singular object. In such instances, it is very important for the investigator to ask if the objects appeared to be flying in formation.

Additionally, you may recall, according to the Bailey report, that the sky was totally grey (or overcast) in the sighting vicinity and so was the object reported. So, it is not too difficult to embrace the notion that no true outline was actually discernible to the witnesses at the time of the event.

Moreover, Susan mentioned during her interview with our investigator, Mr Myers, that the object first looked like two high beams (car headlights) in the



sky. Such is, of course, precisely the appearance of aircraft approach lights - which, in turn, points directly to the fact that many small and medium-sized aircraft fly over the sighting area which is quite close to a civil airport that services several small helicopters, and many privately owned and shuttle-type corporate aircraft.

It was obvious to the investigators that the sighting was almost certainly a misidentification, and it seemed that even the discrepancy involving the odd protrusion on the object's top side, which the girls has observed but Mrs Bailey did not notice, pointed to a banking fixed-wing aircraft as being the object report: for, the aeroplane happened to be flying on an angle which turned its tail away from Mrs Bailey's line of sight; while making it a fleeting but, nevertheless, noticeable characteristic to her children.

The impact of the sighting.

Mrs Bailey and her daughters were tremendously affected by the sighting and no amount of persuasion involving a logical (or prosaic) explanation for the event

with us and permit a psychological probe of her experience. She complied, and the investigation (as with the Raefield affair) revealed a rather remarkable point-for-point *symbolic relatedness* between the sighting particulars and her immediate personal life's situation which, as it turned out, was something of a sad state of affairs. For, she had been recently separated from her husband (Doug) and was living in a small apartment with three of her five daughters. Kathy and Susan were residing with their father. Susan was staying with Mrs Bailey at the time of the sighting. She said she felt good about getting away from Doug (her husband of 15 years) but was deeply concerned about how things might turn out for her, and extremely apprehensive about how things might go for the children.

Mrs Bailey's dynamic display

At first, Mrs Bailey reported observing one yellow point of light in the sky (since the sky was completely overcast, that is, ominously toned, and because Mrs Bailey's first perception was that of a yellow (caution) light, we

ley's attention was so riveted to the object that she was totally unaware that her five-year-old, Debbie, was actually standing on the hood (bonnet) of the car, jumping up and down and screaming her head off! It was at this point that the object symbolically took on the great emotional significance which was primarily kindled by a deep-seated fear she had long harboured concerning the potential of an incestuous episode taking place involving Mr Bailey and their oldest daughter, Kathy.

This fear was not a product of fantasy, but a hard-core reality that tore at her from many sides. For Doug had already attempted "this unspeakable act" on a couple of occasions when he was drinking heavily.

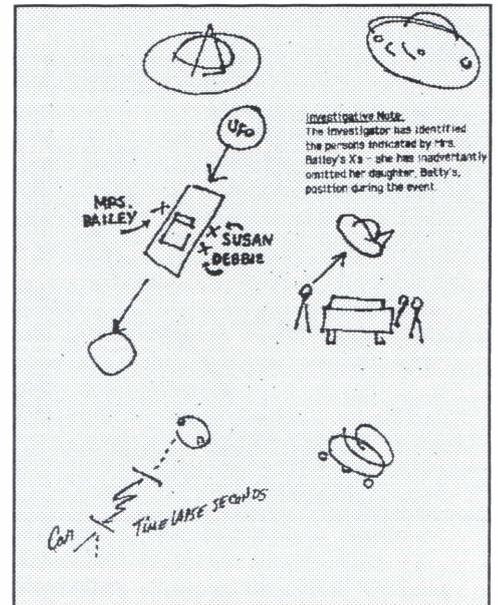
What's more, her two eldest daughters who were still residing with him were receiving little, if any, meaningful guidance, and Kathy and Susan were also creating additional stress loads on Mrs Bailey because they were succumbing to a variety of teenage peer pressures.

In fact, the financial situation was so dire that even though Mrs Bailey deeply yearned to have all the children living with her, it really was totally impossible to make all the arrangements, primarily because of Doug's obstinacy and lack of financial support. But Mrs Bailey's seemingly monumental problems did not start in recent times - indeed, they were ongoing long before this she was married.

Some background on Mrs Bailey

Her childhood was a somewhat hurried affair - for she was the oldest of four siblings and was called upon to help out quite a bit at home (Mom and Dad were alcoholics). She attended parochial elementary and secondary schools and managed to obtain the equivalent of an academic high school diploma from a trade school. Her grades were average and she seemed to excel in writing short stories and poetry.

She was, in every sense



AN EXPERIENCE

*A lonely single little gray
Not at all reflected
A moving night sky
And I, the selected.*

*No beauty of its own
No moon to chaperon
No cheers, no welcome
I, the audience alone.*

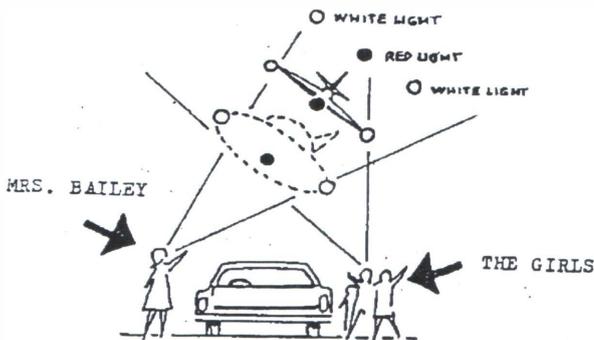
*No mystery, no illusion
No trick of the eye
Yet, in my wonderment
I did not ask why.*

*You came to me in motion
I do not know from where
If memory serves me right
You just happened to be there.*

*You were my childhood dream, come
back
On the seventeenth of November
A dream I'd often dreamed
And now always will remember.*

*A child's dream come true
But as real as real can be
Born of elements unknown
Somewhere in the galaxy.*

*And in all your elegance
You stood without a glow
But I'll remember always
My little gray UFO.*



could diminish the validity of their UFO encounter; for, like Mr Raefield, Mrs Bailey staunchly maintains the belief that she had indeed observed an alien space craft.

In fact, the impact of the observation was so profound that it rekindled her long latent desire to write poetry. Mrs Bailey's first effort was, appropriately enough, about her UFO experience. (see right margin. We wish to thank her very much for allowing us to publish it.)

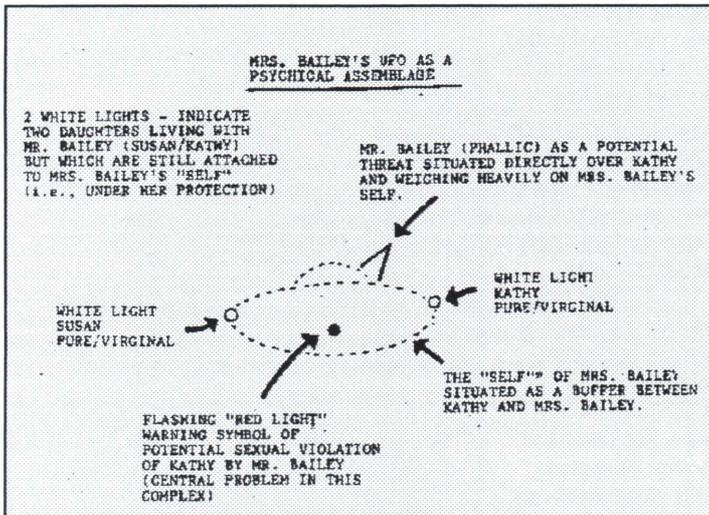
The psychological probe regarding the event

During our inquiry into the sighting, we asked Mrs Bailey if she would be willing to co-operate

might suspect that an intuitively apprehensive attitude was in keeping with the coming event - simply because of its "ominous likeness" to her intrinsic tensions and fears).

Then seven lights (UFOs) appeared (i.e., the total number of family members) then five lights (i.e., the number of children), then one UFO, which was a disc-shaped (tri-lighted) contraption that featured a dome on its top and a fin-like protrusion situated towards its trailing edge. At the closest approach point during the event, Mrs Bailey said that "the saucer passed directly above her car!" causing much excitement and a curious mixture of fear, fascination and awe. In fact, Mrs Bai-

of the word, a truly reverent practitioner of her faith and still finds much strength in it; indeed the very strength that carried her through her impoverished youth and fifteen years of marital turmoil. For, in both instances she held firmly to the mistaken belief



that things would work themselves out somehow.

At the age of twenty-one she married Doug, who had recently inherited a small business and then went on to lose it about eighteen months later as a direct result of his alcoholism. He then took on a job as a truck driver; and, needless to say, Mrs Bailey was forced to live with the constant fear that his drinking problem might cause a serious accident, cause him to be fired, jailed, or even kill someone.

As time went on, his addiction grew worse and it was not until it was too late that it dawned on Mrs Bailey that she had foolishly used her parents' drinking habits to gauge his by. Obviously, they were all hopelessly hooked, but Doug's problem had become far more serious and he was much more dependent upon her than they ever were. She consulted two priests about the ever-mounting problems. They patiently and sympathetically listened, but offered very little actual help. After several meetings, she came away from them with the growing feeling that they could not possibly understand what she was going through, "Being unmarried persons themselves", just as she could not understand why they insisted on referring to the living hell she was enduring (her marriage) as a blessing, let alone something to be considered sacred.

Although her faith was still intact (for she did believe in God) the Church's strict rules on divorce had become totally unacceptable to her. Something had to give, she thought. "Why should I die hard!" she said. "I didn't do anything wrong!" So, she began to look around for something a little more *down-to-earth* to believe in. But, she was not quite sure what that might be. She knew she wanted some affection, respect, understanding, appreciation, and someone she could depend upon just a little bit.

So she ventured into the world on her own for the very first time in her life, with the only things she had in her possession - five children, the clothes on her back, and an exceptionally high moral standard as her guide. She had grown completely weary of doing for others who did not appreciate it, and she refused to continue to wait patiently for some kind of reward for her years of doing without, while hoping and praying for a change for the better to develop miraculously in others. She realised that being tormented and unhappy was not in the scheme of a merciful Lord's plan but, rather, something that man inflicted upon man or sometimes even inflicted upon himself. "God helps those who help themselves", became her new motto and a developing self-confidence was established as her vanguard.

Content of a 'dynamic display' UFO experience

So, it appears that Mrs Bailey's UFO observation was played out and experienced through "a dual process of perception" - the first being that of a sudden interruption of her consciousness by direct sensory stimuli (i.e., the observation of a fleeting UFO), and the second being that of a completely *unconscious* form of recognition and emotional response to the symbolic *situational and confrontational* dramatisation of her immediate anxieties and fears that was unfolding in front of her. Perhaps Mrs Bailey intuitively summed up her experience best when she wrote in her UFO poem . . . "You came to me in motion, I do not know from where. If my memory serves me right, you just happened to be there".

Mrs Bailey now expressed the thought that her existence was not mundane but rather

exceptional and filled with new purpose (a sentiment often expressed by UFO observers). These remarks were not the kind of "ego-inflating" statement that might signify the lifting of one's mind from its hinges; but, rather, the kind which bolsters an already battered personality, defending it from more harm.

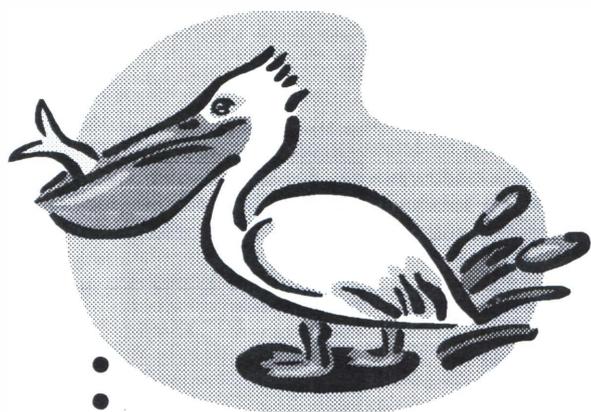
Indeed, hers were expressions of an extraordinarily soothing nature, which emerged in her mind in a rapid-fire form of cognition. In them she found refuge, strength, and hope. Was her UFO sighting the modern-day equivalent of a genuine religious experience? Her philosophical and "spiritual" transformation (or conversion) seems to be, at least in part, related to the event.

She found herself writing more poetry, sleeping and eating much better (gaining ten pounds in one month); most interestingly, a nightly skywatch (UFO surveillance) performed with binoculars borrowed from her brother became a family ritual for about three weeks (nothing unusual was observed during this time). Since then, her situation has improved - *all* of her children now live with her and she has met someone who is very special and she thinks that he feels the same way about her. She is thirty-nine years old at the time of this writing and has just started to really live.

Bailey case summary

It appears that we are left with four possibilities to consider regarding these enigmatic experiences: either the UFOs are seemingly weightless alien spacecraft or holographic transmissions (of unknown origin) that tend to behave like (or mimic) mental mechanics and human emotions. Or, perhaps they are "psychical projections" that can leave a trace on a photo negative and even return a radar echo, as Dr C.G. Jung mentioned many years ago. Or, they may represent something that is only perceived by people caught up in a synchronous psychical and physical state or situation. This is a problem that seems to challenge our concept of *reality* because it may illustrate that the observer and the phenomenon that he or she is observing are one. If true, one could hardly be ridiculed for thinking of such UFOs as modern-day signs in the skies

*El pelicano es fuerte en sus apreciaciones,
pero muy razonable.*



THE PELICAN WRITES...

Denis Plunkett, founder of the British Flying Saucer Bureau (originally a branch of AI Bender's International Flying Saucer Bureau) has written to *The Daily Telegraph* (14 May 2002) to point out that UFO sightings are now closely monitored "... with the result that we now have a greater understanding of these craft and their performance capabilities". As one of the few who believed in the saucers fifty years ago he is particularly satisfied to see how the subject has progressed.

He concludes: "This progression, now producing scientific results and measurable data, can only improve our knowledge and understanding of one of the greatest ongoing mysteries, which requires just one sighting to be proved genuine for us to realise that we are not alone in the cosmos."

This is typical 1950s ufology, just like that which old birds like The Pelican used to know and love. People sitting around in one another's houses drinking coffee, or in hired rooms, or pubs, and discussing the latest sightings, and the latest gadgetry for obtaining the final proof of their reality. These gadgets included cameras, and even those new-fangled tape recorders in case the UFOs made a noise. Then there were the UFO detectors. Ufologists would set them, they would go off in the middle of the night, and they would rush outside to find that the sky was overcast. Never mind, we would soon have the proof and people would have to believe. It is good to see this

great tradition still being observed.

This tradition is also preserved in *UFO Magazine* (UK), the only British journal on the subject which is available at newsagents. Its cover bears the slogan "The truth is coming..." and the editorial usually contains attacks on the sceptics and words of encouragement for the believers. There are lots of pictures of the more notorious ufologists addressing crazy conferences, and lots of fuzzy photos of blobs in the sky (or blemishes on the film). Implausible UFO stories are described as "sensational" and absolutely barking-mad stories are described as "controversial".

One of these barking-mad stories is apparently so "controversial" that it is described in the May 2002 issue as "highly dubious". This is the story of a character who calls himself "Dr Jonathan Reed", who claims that his dog was killed by an alien entity. "Dr Reed" then attacked the alien and, believing it to be dead, took it home with him. The alien was not dead and recovered, but eventually died, so "Dr Reed" put it in his freezer. There is much more of this nonsense. And no, don't waste your time asking for evidence.

Now all this allegedly happened in America, of course. If it had happened in Britain it would almost certainly have been ignored, even by the 1950s-style ufologists, as being too absurd to waste time on. However, in the USA it not only got enormous publicity, with "Dr Reed" being invited to address some of those mad conferences, but has also been subjected to intensive investigations which - surprise, surprise - actually managed to prove to the satisfaction of all except a few who are making a bit of cash out of it, that it is indeed a lot of nonsense.



THE PELICAN was surprised to read in Moseley and Pflöck's new book, *Shockingly Close to the Truth*, Jim Moseley's accounts of his meetings with Dr J. Allen Hynek. Moseley portrays him as unflappable and speaking in whispers, so that he had to strain to hear him.

This certainly does not tie in with The Pelican's recollec-

tion of meeting the good doctor. Now, The Pelican has the ability to assume (approximately) human form, and one day in about 1968 he was browsing among the ufology and assorted esoterica in Watkins bookshop in Cecil Court, London, when he noticed Dr Hynek, Charles Bowen (then editor of the then-respected *Flying Saucer Review*) and another man talking together outside. The Pelican went out and was immediately recognised by Bowen, who thought he was an obscure ufologist whom he had met once or twice before; The Pelican of course did not disillusion him, but the other man, who was introduced as an Australian astronomer, was obviously not fooled by The Pelican's shape-shifting trickery and left rather hurriedly.

Hynek was prattling on about something, but to The Pelican, whose hearing has never been acute, he came over loud and clear. Eventually he paused for breath and suggested that we should go for a drink. On being informed that the pubs had just closed for the afternoon he became extremely agitated, and any passer-by would have had to have heard his comments on Britain's licensing laws (as they then were).

Eventually he calmed down a bit and Bowen led the astronomer and The Pelican to a Chinese restaurant. The waiter produced a menu and The Pelican announced that as he had had his lunch, he would prefer to have just a cup of tea. The waiter shook his head. "No. Not just. Cup of tea. Must have. Full meal." Before The Pelican had a chance to deal with this minor problem, Hynek exploded. "This is ridiculous! Come on, Charles, let's get the hell out of here!" Needless to say, it was not difficult to hear what he was saying. The ufological trio ended up in a Joe Lyons (remember them?), where they were ignored for ages. Hynek gaped incredulously as Bowen explained that they could hardly afford to employ any waiters because of the notorious Selective Employment Tax. Hynek sat and simmered, and The Pelican feared for his blood pressure.

All this is very different from the unflappable, almost inaudible Hynek depicted by Jim Moseley. Further information on this matter would be welcome.



BOOK REVIEWS

Reviews by Peter Rogerson, except where indicated

Keith Tutt. *The Search for Free Energy: a scientific tale of jealousy, genius and electricity.* Simon and Schuster, 2001. £18.99.

Nick Cook. *The Hunt for Zero Point.* Century, 2001. £17.99

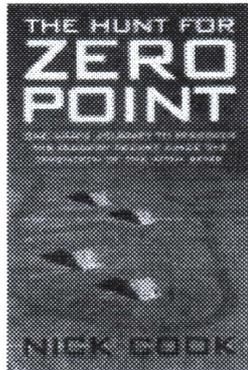
Lynne McTaggart. *The Field: the quest for the secret force of the universe.* HarperCollins, 2001. £17.99

There is a piece of ancient Brigantian wisdom which says 'tha can't get owt for nowt', but this never stops people trying. Keith Tutt provides an overview of a whole range of attempts to create free energy machines in the twentieth century. Not being a physicist or an engineer it is difficult for your reviewer to know how seriously to take any of them, but the general picture does not seem very promising. Most of the candidates considered seem to be the usual backyard inventors who have 'discovered' ways around the second law of thermodynamics to discover what are, in effect, perpetual motion machines. The suspicion is not assuaged by the extreme secrecy with which many of these people operate(d) and by the copious amounts of pseudo-scientific waffle they come up with. There also seems to be clear connection with radical right political views

Some more respectable candidates are considered, such as cold fusion, which Tutt seems impressed by. Pons and Fleischman, its 'discoverers' were certainly in different class from the backyard inventors. Perhaps they discovered something which needs investigating but was not the cold fusion which they thought they

had finally found.

The latest candidate for providing free lunches is the so called zero point energy, the random quantum fluctuations in absolute vacuum at absolute zero, which leads to 'virtual' particles being created and destroyed in fractions of nanoseconds. All of this is, almost by definition, a completely random process, and



locally is very very weak indeed. This doesn't stop people trying to build perpetual motion machines using it, or for giving it all sorts of weird powers. In all three of these books the name Hal Puthoff appears as a central character in this research, but none of the authors

however seem eager to explore how he was taken in by the conjuring tricks of Uri Geller.

Despite its title, *The Hunt for Zero Point*, is not really about this topic at all. Instead it is all based on the fixation that the United States government possess anti-gravity technology inherited from the Nazis. On the absurd Nazi secret science myth see Kevin McClure's devastating review in *Fortean Times* 155. (And his *Anomalist* article now

on the Magonia website: www.magonia.demon.co.uk/abwatch/naziufo/naziufo1.html)

This whole book reads as though the author thinks he is Fox Mulder, and we get all the clandestine conversations and hidden clues. The fact that at least one of the amazing inven-

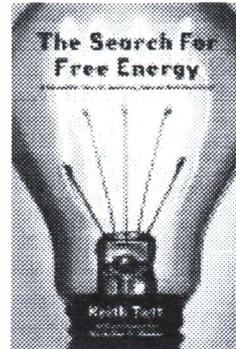
tions discussed here resembles something out of recent early evening TV science fiction show is of course a pure coincidence. In addition to the Nazis, we get T. Townsend Brown, America's answer to Leonard Cramp, who was chucked out of NICAP back in 1957 as his antigravity flying saucer propulsion theories were thought to be bringing the organization into disrepute; and the amazing John Hutchison and his even more amazing machine. Readers of *Magonia* will remember that out editor was distinctly unimpressed by this.

After reading this book three possibilities come to mind. One is that the "aviation editor and aerospace consultant" of the allegedly authoritative *Jane's Defense Weekly* really believes this sort of guff, that it is a cynical money grabbing con, or that he is himself a secret agent of some sort, out on a deflection exercise, making something so ridiculous that no other journalist will touch it with a barge pole.

Lynne McTaggart, a journalist and alternative health

promoter, is one of those who attribute all sorts of weird powers to the zero point and she charts the claims of people who link zero point energy to everything from ESP to homeopathy. This is presented as the revolutionary New Science, as one reads through this book the doubts

creep in, and we get the same old suspects from years back paraded for our delictation. There is Edgar Mitchell, Targ and Puthoff, Karl Pilbram, David Bohm and so on. All names and studies which date back to the time I was student member of the SPR 30 years ago, at a time when I actually believed in a



William F Hamilton. *The Phoenix Lights Mystery.* Skywatcher Publications, 2001. \$15.99

This is an account of the author's investigations of that ufologists' Holy Grail a multi witness case, from March 13 1997, when a large number of residents of Phoenix, Arizona saw, and some videotaped, strange lights in the sky. Alas as always seems to be the case the result is as incon-

clusive as ever, with rival investigators coming to differing conclusions.

Hamilton defends their anomalous nature, while fellow MUFON researcher Richard Motzer claims they were flares. Motzer has the backing of Bruce Maccabee, (not a noted UFO sceptic!), and as Hamilton claims an impressive record of personal UFO experiences, has a background in the contactee move-

ment and authorship of several rather sensational books on his CV, the betting must be on the flares.

As even the most impressive multi witness case can scarcely fill a book, much of this volume is padded out with tales of giant black triangles (one allegedly 2 miles/3km across), crashed flying saucers and alien abductions, none of which adds to the credibility of the tale.

lot of this stuff. Then as now all of this 'consciousness research' was being promoted as the New Science which would transform the world in a few years time. A generation on the same old stuff is still being churned out.

There are some new additions such as Robert Jahn (dating from about 20 years ago), and Dean Radin who claims that strange things happen in random number generators when lots of people watch TV at the same time. Interesting if shown to be true, but certainly not capable of bearing the great weight of metaphysical speculation heaped upon it. However the new star in the firmament is Jacques Benveniste whose experiments with 'the memory of water' date back 15 years or so. JB was subjected to the ministrations of James Randi *et al*, who acted as like rather severe Egon Ronay inspectors. This makes JB a 'martyr' subjected to a 'reign of terror' in the eyes of the paranormalists. Needless to say the nasty old



sceptics never actually torched his laboratory, put a bomb under his car or fed his kids sweets filled with rat poison, or even picketed his home. I am sure that Britons doing animal research or Americans working in abortion clinics would gladly swap a bit of ridicule for the real hard stuff!

Benveniste's story illustrates something else, a kind of masochistic victim personality, constantly courting rejection and ridicule. Benveniste's original article could have been sent to half a dozen scientific journals and it would have appeared with very little fuss. But no, he sends it to *Nature*, knowing its editor's implacable hostility to anything remotely smacking of the paranormal. After the fuss, B now shows a sure instinct for self destruction. While the original claim, though extraordinary, was not altogether risible and there were probably quite a few colleagues who thought that John Maddock had gone over the top, B proceeds to escalate his claims to the totally

ludicrous. The memory or the field can be transmitted to water after being sent over the Internet and downloaded onto a floppy disk. When one assistant failed to get the right results it is because "she was emitting electromagnetic fields which were interfering with the communication signalling of his experiment" which sounds like a pseudotechnical way of saying she had the evil eye.

One can see what would happen if this sort of thing got into general culture: a new cause of persecution. You could be got at not just because you have the wrong ethnic origin/gender/sexual orientation etc, but because you have the wrong electromagnetic signals. As it was, the female assistant in this case was bloody lucky, because a male researcher in another lab had the same problems. Otherwise no doubt it would have all been blamed on her time of month and we would be back in the days when menstruating women were believed to blacken mirrors and turn milk sour.

And that's the nub of it, there is nothing new, revolutionary or liberatory about this stuff. It is old time magic and superstition wrapped up in a glittery parcel of

science, possible science and pseudoscience. All the talk of holism (invented by the racist South African politician and retired terrorist Jan Smuts) and holistic appeals to a fear of the real, revolutionary, modern and liberatory world. At root it appeals to what Eric Fromm calls the 'fear of freedom', the need to be part of some great whole which will lift the burden of individuality and the need to make personal decisions. (It is perhaps not a coincidence that the holistic "we must learn from nature" inventor in Cook's book, was - though Cook clearly doesn't comprehend this - a practitioner of German *volkish* science, who by his own account was well in with the Nazis, who liked that sort of thing, not your 'cosmopolitan Jewish science'.

What emerges from all three books is that there is nothing so weird and absurd that you can't get some scientifically illiterate military type or business executive to pour huge sums of somebody else's money down the drain in pursuit of a free lunch. This is what happens when monumental credulity meets monumental greed.

Bill Ellis. *Aliens, Ghosts and Cults: legends we live.* University Press of Mississippi, 2001. £38.00.

In this collection of articles folklorist Bill Ellis explores the borderlands of experience and folklore, and the nature of legends. While sections of the book are clearly of interest only to the folklore specialist, other parts should be of interest to a more general audience. Of particular interest will be the story of the Frackville Angel, actually a phantom hitchhiker said to utter gnomic prophecies of the end of the world, the Pizza Hut ghost, and his, perhaps over generous review of Whitley Streiber's *Communion* in the chapter 'Varieties of Alien Experience'. For Ellis the legends grow up to provide a narrative which can 'name' nameless numinous experiences which exists on the very boundaries of reality. These ambiguous experiences can be accommodated by being given a name and a tradition. As Fortean are coming to realise, not all these experiences can ever get named, and remain protean accounts, ca-

pable of drifting into any one of a number of categories.

In his general approach Ellis has clearly been influenced by David Hufford, who is rapidly acquiring the status of an unchallengeable sage. Ellis's arguments that we should not dismiss experience narratives with 'rational explanations' fall into the same category. Cultural historians however might argue that this is just one aspect of a wider world view which holds that personal testimony and 'self esteem' should not be challenged. Elsewhere however Ellis does challenge, quite correctly in my opinion, the personal testimony of people who claim to have been members of Satanic cults and have sacrificed babies. And how do we deal with memories that are not supernatural, but say racist or misogynist?

The claim that one can somehow perform a kind of archaeology and find the 'true' women behind the narrative, in some hesitant first draft, is a very problematic claim. Long before any first telling to another, there is bound to have been a series of

narratives to one's self, and in any case as our ordinary perceptions are bound totally with culture, how much more so this must be with the ambiguous and liminal.

The legend does not just name and unnameable; it can domesticate and tame, and reduce it to a manageable state.

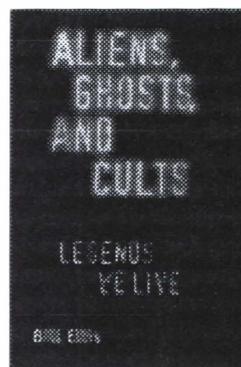
The legend trips of young people, Ellis argues, perform something of this function. They allow youngsters to symbolically confront death and the horrors of the real world, in a controlled, game reality. What lies behind the legend can be immeasurably worse than any spooky tale.

Ellis tracks down the legend of the 'Orphanage on Gore Lane', a spooky old ruin on a rural back road, not only to the domestic tragedies of the neighbourhood but to a displaced memory of a great American disaster, the Lake View school fire, a horror beyond words and imagination, which was ex-

punged from official history. The horror is transported as people move out of the city, attaching itself to new locations, and given a legendary status which distances the victims (who are orphans, i.e. 'not kids like ourselves' as in the real events). Only by reducing it to

legendary status, a local ghost story, can this unassimilable nameless horror which can neither be forgotten nor remembered, be contained and brought back into memory.

On a lighter note Ellis goes some way to portraying his campus town of Halzeton as one of the legendary weird places of America, which deserves to be on the same tourist trail as Port Pleasant. Weird Fortean events, rumours of high school Satanists and a school principle called Mussoline (when was that last letter changed I wonder) make an ideal location for one of those high school TV series.



David Clarke and Andy Roberts. *Out of the Shadows: UFOs, the establishment and the official cover up*, Piatkus, 2002. £17.99

There is considerable confusion among ufologists about government secrecy concerning UFOs. Many of them apparently fail to understand that what is kept secret is the investigation of UFO reports, not the UFOs themselves. It is not surprising that governments keep their UFO investigations secret, as many amateur UFO organisations also find that they need to carry out their initial inquiries without informing the news media or other ufologists, as it is not possible to carry out a serious investigation of a UFO incident in a blaze of publicity. Also, UFO witnesses have the right to demand that their names and addresses are not published without their permission.

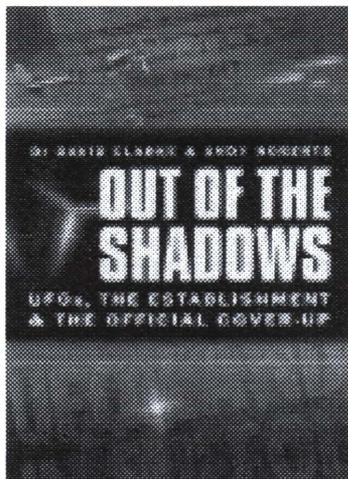
In this book, Clarke and Roberts show that there was just as much disagreement and confusion among the professional British UFO investigators as among the amateurs when faced with numerous reports of strange objects in the skies. However, scepticism generally prevailed among senior RAF officers and their scientific advisors. They rejected the view that the UFOs were real, physical objects for two main reasons: the lack of physical evidence; and the lack of independent witnesses to apparently inexplicable sightings. They were not too impressed by anomalous radar echoes, as they knew that these could be caused by abnormal atmospheric conditions, by interference between different radars, or by faulty components in radar equipment.

A good example of the cautious approach appears in the authors' account of two sightings at the Royal Aircraft Establishment, Farnborough in 1950. On 14 August, Flight Lieutenant Stan Hubbard heard a strange humming sound and saw a disc-shaped object which passed overhead making humming and crackling noises. He estimated that the object was at a height of about 1,000 feet and was about 100 feet in diameter. He also said that there was at least one other witness, an airwoman from the nearby flight dispatches office, who was hysterical.

Scientific intelligence officers who interviewed Hubbard

refused to comment on the other alleged witness. In their report they accepted that he had honestly described what he had seen, and added, "... but we find it impossible to believe that a most unconventional aircraft, of exceptional speed, could have travelled at no great altitude, in the middle of a fine summer morning, over a populous and air-minded district like Farnborough, without attracting the attention of more than one observer." They concluded that Hubbard was the victim of an optical illusion.

The intelligence officers remained sceptical when Hubbard reported another sighting at Farnborough on 5 September. This time there were five other witnesses. They noted that the object



was at a great distance, giving plenty of scope for misinterpretation, particularly as the witnesses would have recalled Hubbard's sighting of 14 August. The six witnesses were together in one group, and the intelligence officers again noted that there were no independent witnesses.

The witnesses were not happy with the official verdicts on their sightings, and doubtless most ufologists would consider this case to be a typical example of government cover up. But this is an example of common sense rather than cover up. Some ufologists are all too ready to accept certain reports as evidence of alien spacecraft without considering other possibilities, and without careful scrutiny of witness testimony.

Although much has been written about "foo-fighters", it is nearly all based on American reports. Clarke and Roberts have unearthed some interesting documents concerning RAF reports and investigations into them. The term

"foo-fighter" was unknown to British aircrew and two of the commonest terms they used were "the light" and "the thing". Investigators were unable to provide plausible explanations for many of the reports, but as they had no reports of aircraft being damaged or destroyed by the mysterious objects, they concluded that, whatever they were, they were fairly harmless.

The Swedish ghost rockets of 1946 caused rather more consternation in the Air Ministry, as many believed that the objects were Soviet missiles. There was a very large number of reports, but the sceptical Air Ministry scientist Dr R.V. Jones said that at least a small percentage of them must have crashed on Swedish territory and he challenged investigators to produce samples of wreckage. One fragment allegedly from a ghost rocket was found by scientists at Farnborough to contain small amounts of iron, nickel and copper, with 98 per cent of an unknown element. This failed to dent Jones's scepticism. He asked the scientists if they had tested the sample for carbon. They had not, and when they did so and had a good look at the sample they realised it was just a lump of coke.

The authors have reinvestigated the Lakenheath-Bentwaters case of 13-14 August 1956, by searching for documents and interviewing witnesses. Their comments will not please the ETH crowd. They write, "... as was the case with many other 'classic' UFO incidents, when the 'evidence' is carefully scrutinised the facts are found to be not as clear-cut as they have often been portrayed in the UFO literature. Natural phenomena, human perception and the will to believe on behalf of both witnesses and commentators have all contributed to the creation of an elaborate story from very mundane origins."

This book is certainly far removed from armchair ufology. Clarke and Roberts have concentrated on setting out the facts, based on their extensive studies of official documents and interviews with witnesses, and very little space is devoted to theories or speculations. This makes it a valuable reference source and an essential purchase for what Jim Moseley calls Serious Ufologists.

John Harney

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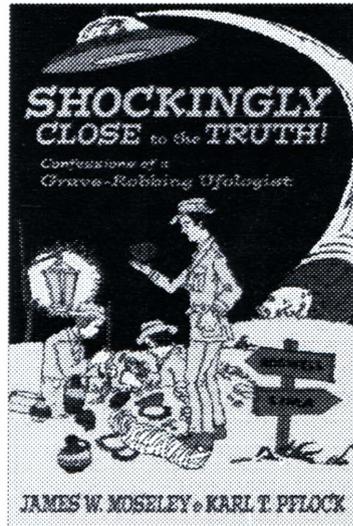
The **Magonia Supplement** with news and comment on the world of ufology. Magonia Online gives you the full picture

James Moseley and Karl T. Pflock. *Shockingly Close to the Truth: confessions of a grave-robbing ufologist.* Prometheus Books, 2002. \$20.00

We have been waiting for this book for a long time, ever since it was first hinted at several years ago, in Moseley's scurrilous eight-page rag, *Saucer Smear*. One thing we knew, this was not going to be a book for Serious Ufologists. Moseley has a pretty low opinion of Serious Ufologists, and it's fair to say that most have a pretty low opinion of him. None more so, it seems, than Wendy Connors, co-author of a Serious Book on the life and works of Edward Ruppelt.

In an amusing posting on the invaluable UFO UpDates mailing list (invaluable for the insight it gives into the preoccupations of American ufologists) Ms Connors describes the tome as a "yawn-filled romp", "this mish-mash of drool" and "a one-man quest for insignificance". So come on, Wendy, what did you *really* think of it?

Leaving aside her concerns that 'real men' don't keep diaries, I worry for her eyesight, as she complains of the small size of the type font. It caused no problems to your bespectacled review, who



consumed this book practically in one sitting during a short holiday in Paris. Not even the attraction of getting involved in a Le Pen vs. May Day Demonstrators punch-up at Bastille tempted me out of my hotel room until I had finished it.

It would have been a great disappointment to me, and I imagine also to Jim Moseley, if it hadn't produced such a howl of outrage from Ms Connors, representing Serious Ufology. I almost feel her review may have been written in collusion with Moseley. One last quote: "It definitely will keep your expenses for Ex-Lax to a bare minimum and once you've

finished reading [it], it will be a nifty book to support the broken leg on your sofa for a year or so" - all of which gives us an interesting insight into home life *chez* Connors.

The rest of us however, can just sit back and enjoy this scurrilous romp. We had an inkling of what might be included when we read a veiled reference to the 'fifties contactee Orfeo Angelucci and some unsavoury practices involving a flock of sheep. Naturally, once this had been hinted, the wait for publication day became unbearable. Not all the revelations in *Shockingly...* are on the same level, but the feet of clay that support many Serious Ufologists - and quite a few less Serious ones - are entertainingly revealed.

But what's all this got to do with flying saucers? Surely these personal asides are irrelevant to the study of ufology? After all, isn't it a proto-science, which will in fifty years time, as Jerome Clark asserts, be producing tangible results; and the scientific establishment will be feeling rather ashamed at how dismissive it was about UFOs fifty years previously? And aren't books like this just ammunition for those who wish to prevent the upward evolution of ufology? After all, the damned

thing's published by *Prometheus*, and the co-author Karl Pflock wrote a sceptical book about Roswell!

Despite the occasional heartfelt plea in UFO zines and website to "keep personalities out of ufology", in practice this is impossible. Most aspects of UFO research are centred around particular individuals. A 'Mack Abduction' is a different creature to a 'Hopkins Abduction' (and Moseley has some interesting things to say about the latter, although you may have to read between the lines - I suppose m'learned friends are active in America as well!). There are Persinger phenomena and there are Maccabean photographs, and you actually do need to know about the personalities involved to make sense of the phenomenon. In this field no-one makes a value-free judgement.

In Moseley's book the personalities - not least that of Jim Moseley himself - take centre stage. Having read it you will be greatly amused - there are plenty of laugh-out-loud moments - and will be better able to make your own value-judgements the next time you read or hear a Serious Ufologist spouting about Scientific Ufology.

John Rimmer

•• **Marcus Chown.** *The Universe Next Door: twelve mind blowing ideas from the cutting edge of science.* Headline, 2001. £14.99.

•• **Steven Hawking.** *The Universe in a Nutshell.* Bantam Press, 2001. £20.00.

•• **Martin Rees.** *Our Cosmic Habitat.* Weidenfeld and Nicolson, 2002 14.99.

We all know what dull unimaginative fellows those mainstream establishment scientists are; after all the paranormalists have been telling us such for years. We have therefor to assume that they can outdo the ideas brought out of the specialist literature in this book. These ideas include the notion that there might be parts of the cosmos where time runs backwards, that sub atomic particles might be miniature time machines, there are other universes where not only the basic physical constants differ from ours, where there not only quite different laws of physics, but different kinds of

mathematics, that maybe the universe was built by super aliens in a previous one, that there are uncurled up extra dimensions which might be revealed in high energy experiments, or that there might be invisible worlds of mirror or shadow matter reacting with our own only through gravity and so on.

Wildest of all is one of the consequences of the many worlds interpretation of quantum mechanics, that if you got killed by an instantaneous annihilator initiated by a quantum event, as far as you were concerned you would always survive as at each "go" there would always be a reality in which the destruct mechanism was not activated. (Definitely don't try this one at home kiddies, there is no normal means of killing yourself that is either instantaneous enough or quantum initiated for this to work). However as far external observers were concerned sooner or later

you would be dead. (Chown evades the point that this extreme example highlights the general solipsistic consequences of the many worlds hypothesis)

Anti establishment types might of course argue that ideas in Chown's book, though appearing in mainstream scientific are from eccentric barely tolerated figures. However both Hawking and Rees note one variant of what is known as "brane theory" in which there are 3 space 1 time universes separated from ours by a tiny fraction of a millimetre in an uncurled up 4 th spatial dimension. Some versions of this allow for a weak gravitational interaction which would be observational indistinguishable from the aforementioned shadow matter. As Rees is the astronomer royal and Hawking the Lucasian Professor at Cambridge they *are* the establishment.

Compared to this heady stuff, much of the paranormal

seems rather bland and er em unimaginative, all very 19th century and pre quantum. Where "mainstream" wild stuff wins out is that a) it explains anomalous observations without contradicting other observations b) much of it can be expressed in mathematical language. If a paranormalist wants to win the Nobel prize all they have to do is come up with a mathematically expressed theory linking quantum physics with general relativity, which predicts psi like events and isn't incompatible with well established observations and experiments.

That is not to say any of these ideas are "true", indeed the fact that they can be imagined and expressed in verbal terms suggests that at best they are only models which coordinate certain kinds of observation. We should be doubtful of claims that science is near theories of everything, one suspects that there is going to be no final model



HOLD THE BACK PAGE

An Internet search for "Magonia" on Google lists over 5100 items. Not all of these are references to this magazine. A substantial number lead us to Jacques Vallée's *Passport to Magonia*: either text from the book, articles about Vallée himself, or listings in booksale catalogues. Many are references to Vallée's *Magonia* catalogue of 'landing' reports, which formed the basis of Peter Rogerson's greatly under-valued INTCAT.



But there are a few other, quite intriguing Magonias out there. It was Peter who brought to my attention to Internet references to a film called *Magonia* by Dutch director Ineke Smits (above). This film received critical acclaim, having won prizes at festivals in Toronto and San Sebastian Spain, received the 'Golden Tulip' award for best film at last year's Istanbul Festival, and most recently a well received US outing at the San Diego film festival. As far as I can find there have been no showings in the UK.

The website of European Film Promotion tells us this about the film's story: "Magonia is a poetic drama that transports us from our everyday life to an imaginary world in the sky. Each week a son visits his eccentric father on a beautiful island. They fly kites on a beach where sea and air flow together in a watercolour wash. The father captivates his son, telling stories about a land called Magonia. Three magical tales which touch the boy's soul. Together they build a kite in the form of a Magonia flying ship and let their imaginations soar.

"The tales carry them over minarets and mosques, into the desert and out to sea. A woman cares for an old muezzin and falls

in love with his young apprentice. An estranged couple encounters an old man and his son, sparking desires for human contact and freedom. In a fishing port ravaged by storms, a woman waits for the man she loves to return.

"Through these tales, the boy comes to see the world through his father's eyes understanding for the first time the older man's passion and fragility. For both of them Magonia represents unattainable dreams and longings, and the possibility of escaping to a magical place beyond the clouds."

One film site reviews the film: "Magonia is a stunningly visual and lyrical feature film that transports the viewer into the mind of a man living on the edge of insanity. To his son he tells the stories of Magonia, a mythical place in the clouds. These tales provide the key the boy needs to understand his father's inner being. Every week the boy visits the island where his father lives and together they build a kite in the form of a Magonian flying ship. The stories are the father's only way of communicating with his son, and for both of them Magonia represents unattainable dreams and unfulfilled desires."

So the *Magonia* movies has ships in the clouds, weird sto-



ries, and people on the edge of insanity. No change there then.

Another Magonia we came across turned out to be a 'jazz-rock' band from Boston MA (above). Their website tells us that their music is "Instrumental music that stretches the traditional boundaries of guitar, bass and drums. A pulsating lounge-noir vibe that is soothing, raucous and chic." We'd like to think that *Magonia* magazine is soothing and raucous, and we're

pretty sure it's chic and read in all the best noir-lounges.

Another site came up with some interesting info: "Magonia's Greg Passler figured the band were well on their way to bigger things when he scored a deal to have six of the trio's songs featured in a documentary film ... "Unfortunately," says Passler, "I neglected to ask what the documentary was about. I was new to [the business] so I was more focused on compensation, what the songs were worth to us and what would be fair for them." Avant garde became more like wet and hard; the film was a Playboy Channel "documentary" on prostitution. While it did feature interviews with real-life hookers, the film also examined the joys of group sex and partner swapping. The band got together to watch the program, which Passler calls, "a step above porn. It was amusing and uncomfortable at the same time. I'm watching it and thinking that it's interesting how people see your songs differently. But I don't know if I want to write porn music. Our bass player, on the other hand, thinks it's the best thing in the world. He wanted to sell the tape at gigs. Everything is a learning experience."

Indeed, this exploration into the world of the other Magonias has been a learning experience for us too. Especially when the search engine threw up *magonia pubescens*, which fortunately turned out to be merely a species of nut with medicinal properties. There is, it seems, an entire genus called *magonia*, which flourishes largely in South America. Any more sightings of unconnected Magonias greatly appreciated