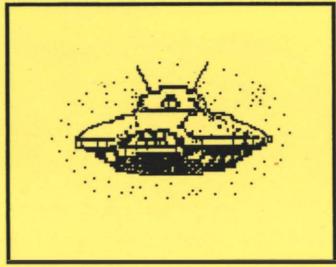
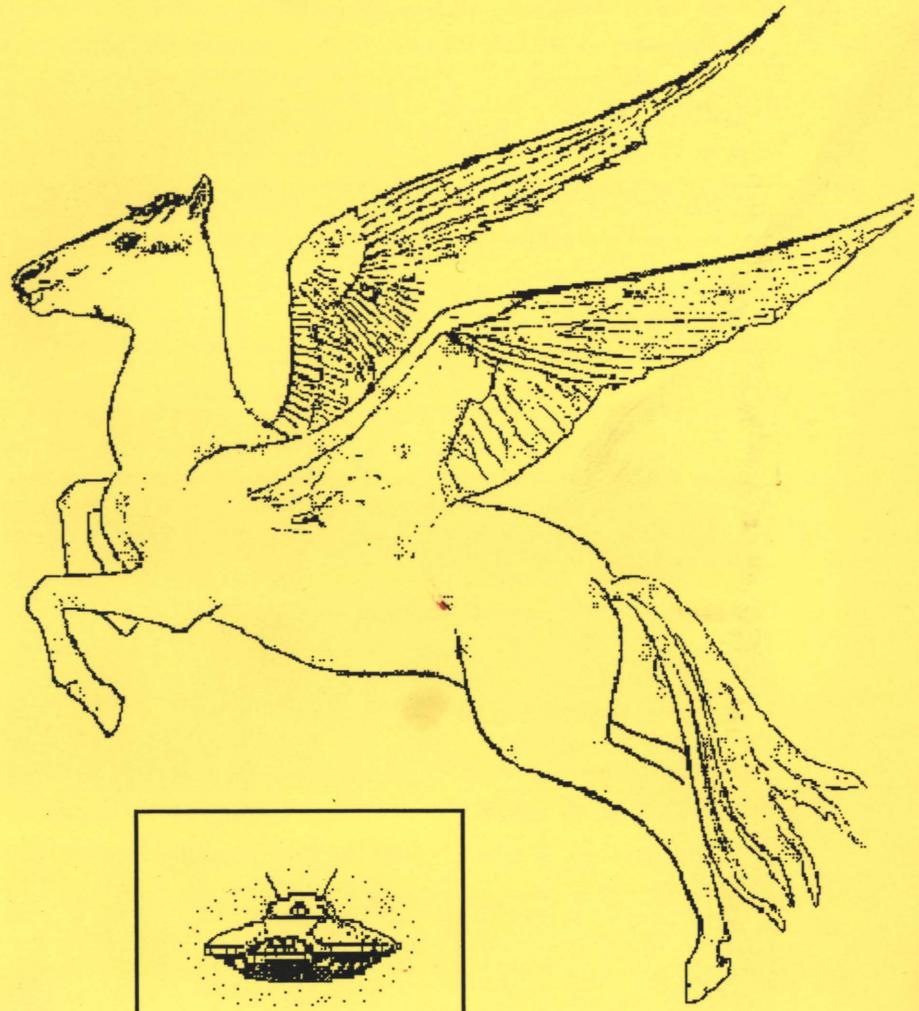


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Surrey Investigation Group into Aerial Phenomena

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THE BLUE SKIES OF MARS

They're telling us now that the skies of Mars are really blue and that naughty NASA, for devious reasons we can only conjecture, has been turning all its pictures red before releasing them. After the faked moon photos and the stubborn refusal to produce close-ups of Cydonia, no one will be surprised.

Since the downing of the Phobos2 orbiter by a missile from the Martian surface (the Russians have it on videotape) there's a suspicion that the place is still inhabited. Sitchin's books contain a still from the tape, together with pictorial evidence that in Sumerian times Mars was a way station for the Annunaki spacecraft, with a shuttle service to and from Earth. The pictogram is dated by the sign of Pisces, indicating an earlier occurrence of the age which is now ending.

The relevance of Sitchin's historical work to questions of past and future interplanetary contact is as unquestionable as the neglect of it by "official" science is reprehensible, but he stands firmly by his original accounts. "When the publishers were bringing out a new edition of my first book," he said to me, "they asked if there was anything I wished to change. I told them 'Not a word!'"

G.M.

Imagine a parallel universe in which the three familiar dimensions of space and one of time are replaced by alternative dimensions beyond our experience. Now imagine that multiple universes exist as membranes, or branes, through a multidimensional hyperspace. These additional dimensions could be the size of atoms, or infinitely large. We would never be able to enter them, yet they could have profound effects on the physics of our Universe.

Welcome to brane world, a bizarre territory so far only proved to exist in the thoughts of theoretical physicists. Although it might sound like a fanciful exercise in boggling the minds of lesser mortals, brane theory is in fact a serious attempt to solve the most annoying problem in modern physics: working out how to unify gravity with the other three fundamental forces of nature — electromagnetism, and the strong and weak nuclear forces.

BRANE WORLDS, THE SUBANTHROPIC PRINCIPLE AND THE UNDETECTABILITY CONJECTURE

Beatriz Gato-Rivera August 2003

In the recent article 'Conflict between anthropic reasoning and observation' (gr-qc/0303070) Ken D. Olum, using some inflation-based ideas and the anthropic premise that we should be typical among all intelligent observers in the Universe, arrives at the puzzling conclusion that 'we should find ourselves in a large civilization (of galactic size) where most observers should be, while in fact we do not'. In this note we discuss the intriguing possibility whether we could be in fact immersed in a large civilization without being aware of it. Our conclusion is that this possibility cannot be ruled out provided two conditions are met, that we call the Subanthropic Principle and the Undetectability Conjecture. The Subanthropic Principle states that we are not typical among the intelligent observers from the Universe. Typical civilizations of typical galaxies would be hundreds of thousands, or millions, of years more evolved than ours and, consequently, typical intelligent observers would be orders of magnitude more intelligent than us. The Undetectability Conjecture states that, generically, all advanced civilizations camouflage their planets for security reasons, so that no signal of civilization can be detected by external observers, who would only obtain distorted data for dissuasion purposes. These conditions predict also a low probability of success for the SETI project. We also argue that it is brane worlds, and not inflation, what

dramatically could aggravate the 'missing-alien' problem pointed out first by Enrico Fermi.

"Innumerable suns exist; innumerable earths revolve around these suns in a manner similar to the way the seven planets revolve around our sun.

Living beings inhabit these worlds."

Giordano Bruno, 1584

1 Preliminaries

Do mountain gorillas know that their 'civilization' is embedded in a larger 'civilization' corresponding to a much more evolved and intelligent species than themselves? Do they know that they are a protected species inhabiting a natural reserve in a country inside the African continent of planet Earth? The answer to these questions is certainly no, they do not know anything about our social structure, our countries, borders, religions, politics, nor even about our villages and cities, except perhaps for those individuals living in a zoo, or adopted as pets.

In the same way, the human civilization of planet Earth could be immersed in a much larger civilization unknowingly, corresponding to much more evolved and intelligent species than ourselves. After all, the sun is only a young star among thousands of millions of much older stars in our galaxy and the possible existence of such advanced civilizations is only a question of biological evolution doing its job, slowly but relentlessly through the millennia. If this happens to be the case it is quite sensible to assume that these individuals regard our planet as a natural reserve, full of animal and vegetal species, the Solar System being nothing but a small 'province' inside their vast territory.

In this situation, the answer to the usual remark 'if there are advanced extraterrestrials around, why they do not contact us openly and officially and teach us their science and technology?' seems obvious. Would any country in this planet send an official delegation to the mountain gorilla territory to introduce themselves 'openly and officially' to the gorilla authorities? Would they shake hands, make agreements and exchange signatures with the dominant males? About teaching us their science and technology, who would volunteer to teach physics, mathematics and engineering to a bunch of gorillas? In addition one has to take into account the limits of the brain capabilities, independently of the culture or education. For example, let us ask ourselves how many bananas would be necessary for the most intelligent gorillas to understand the Maxwell equations of electromagnetism (even if they watch TV or listen to the radio). In the same way we may wonder how many sandwiches, potato chips or cigarettes would be necessary for the most intelligent among our

scientists to understand the key scientific results of a much more advanced civilization. Our intellectual faculties and abilities are limited by our brain capabilities that are by no means infinite. Therefore it is most natural and sensible to assume that there may exist important key scientific concepts and results whose understanding is completely beyond the brain capabilities of our species, but is within reach of much more evolved and sophisticated brains corresponding to much more advanced civilizations.

The motivation for this idea has been the recent article 'Conflict between anthropic reasoning and observation' by Ken D. Olum [1]. In this article the author presents some computations regarding the probabilities that typical intelligent observers belong to a large (galactic size) civilization at the present time. The underlying idea is that in the observable Universe, because of the existence of thousands of billions of stars older than the Sun, there must be huge civilizations much older than ours which could have spread widely through the Universe. (Although not mentioned in [1], Enrico Fermi was probably the first scientist to consider similar arguments, leading to some 'missing-alien' problem or paradox.) *{We thank Juan Luis Mañes and Cumrun Vafa for pointing out this fact to us.}*

In particular, using the assumption of an infinite Universe, like in models of eternal inflation, and doing some conservative computations, Olum predicts that 'all but one individual in 10^8 belongs to a large civilization'. Then he invokes the anthropic premise that we are typical individuals and, as a result, he predicts that there is a probability of 10^8 versus 1 that we belong to a large civilization. Dropping the infinite Universe assumption, but keeping still inflation, the author claims that the predictions are not very different than for the previous case. After analysing several possibilities of where the problem might lie the author concludes: 'A straightforward application of anthropic reasoning and reasonable assumptions about the capabilities of other civilizations predict that we should be part of a large civilization spanning our galaxy. Although the precise confidence to put in such a prediction depends on one's assumptions, it is clearly very high. Nevertheless, we do not belong to such a civilization. Thus something should be amiss..... but then what other mistakes are we making.....?'

In this note we present what we think is the simplest possible solution to Olum's and Fermi's 'missing-alien' problems and paradoxes. As we will discuss in detail, we could well be part of a large civilization spanning our galaxy (or a large region of it) without being aware of it. Therefore one obviously natural solution is that we do belong to a large, very advanced civilization, but we are not 'citizens' of it because of our primitive low status. The two major mistakes of Olum's, therefore, would have been to

assume: first, that we are typical intelligent observers, and, second, that to belong to a civilization implies to be a citizen of it.

Besides, Olum's arguments implying that inflation must necessarily aggravate the (very serious) 'missing-alien' problem do not seem very convincing and it is some brane world scenarios [2], in our opinion, what could in fact aggravate dramatically this problem.

The reason is the following. If there exist thousands, or millions, of parallel universes separated from ours through extra-dimensions, it would be natural then to expect that some proportion of these universes would have the same laws of physics as ours (presumably half of these would be of matter and the other half of anti-matter), and many of the corresponding advanced civilizations would master the techniques to travel or 'jump' through (at least some of) the extra dimensions. This opens up enormous possibilities regarding the expansion of advanced civilizations simultaneously through several parallel universes with the same laws of physics, resulting in multidimensional empires. It could even happen that the expansion to other parallel galaxies through extra dimensions could be easier, with lower cost, than the expansion inside one's own galaxy. *{The first scientists to consider extra-dimensions and parallel universes were probably Maxwell and Faraday in the 19th century. Outside the scientific realm this idea is many thousands of years old. At present we are still in a very premature phase in the study of brane worlds and we do not know whether these ideas are in fact realistic. Cumrun Vafa thinks that the fact that we do not see aliens around could be the first proof of the existence of brane worlds: all advanced aliens would have emigrated to better parallel universes (our Universe has zero measure)[3].}*

In many other universes, however, the laws of physics would be different, corresponding perhaps to different vacua of the 'would be' ultimate Theory of Everything, resulting probably in 'shadow matter' universes with respect to ours. This means that shadow matter would only interact with our matter gravitationally, in the case it would be brought to our Universe using appropriate technology. This does not mean, however, that the shadow universes would be necessarily empty of intelligent beings. If some of them had advanced civilizations, some of their individuals could even 'jump' to our Universe....but we could neither see, nor talk to, the shadow visitors (and the other way around), although they could try to communicate with the 'would be' intelligent beings of our Universe through gravitational waves, for example. Regarding anti-matter universes, the intelligent anti-observers would not send colonizers either. *{although they could send unwanted anti-prisoners, their arrival being known as gamma-ray bursts.}*

We must also point out that in [1] there is a continuous, repeatedly use of the concept 'intelligent observer' without a definition of its meaning. This

fact makes difficult to follow Olum's arguments and computations properly. For example, do the Cro-Magnon and Neandertal mankinds qualify as civilizations of intelligent observers? How about the very primitive human beings living nowadays in some forests? Do they qualify? Do they belong to 'the civilization' of planet Earth even if they know very little about it?

For the discussion in next sections we will use the following intuitive definitions:

Primitive civilizations: Are those civilizations that have a remarkable use of technology in everyday life but are incapable of leaving their planets to colonize other ones in different stellar systems. Their scientific knowledge can have many degrees, ranging from zero to remarkable high levels. In our planet it seems that only the groups of human beings from, approximately, the last 20.000 years qualify as primitive civilizations, corresponding to what anthropologists call the Modern Man, not so the groups of the various versions of the Early Man, who would only qualify as very primitive civilizations. We call the individuals of the primitive civilizations primitive intelligent observers.

Advanced civilizations: Are those civilizations technologically able to colonize other planets from different stellar systems, ranging from a few planets until thousands of them or more in the case of very advanced civilizations. Depending on their technological level they could even travel through extra dimensions (if they exist) and they could visit and colonize planets located in 'would be' nearby galaxies in parallel universes. In this case, they could even expand and colonize more efficiently through some extra dimensions than inside their own galaxies. We call the individuals of these civilizations advanced and very advanced intelligent observers, respectively.

2 The Main Ideas

Let us discuss in detail the possibility that our small terrestrial civilization is embedded in a large civilization unknowingly. This will lead very naturally to the the proposal of two major ideas that we call the 'Subanthropic Principle' and the 'Undetectability Conjecture'.

To start let us come back to the main argument. In our galaxy there are thousands of millions of stars much older than the Sun. Therefore, it seems most natural to expect, without the need to invoke inflation, that in a reasonable amount of stellar systems technological civilizations should have appeared, and a fraction of them (even tiny) should have survived enough to spread to, at least, large regions of the galaxy. It is then very remarkable the fact that the Solar System has never been encountered or colonized by any advanced civilization,..... or has it?

In our opinion there is an important flaw in Olum's (implicit) assumptions about the relations between the different civilizations put into contact in the process of expansion.

Although he does not mention this crucial issue, one gets the impression that he believes that the more advanced civilizations will push the less advanced ones to their own level in order to integrate them, or rather they will exploit, damage, or annihilate them in order to conquer the planet, in the case of aggressive colonizers. We fully agree that aggressive advanced civilizations will exploit/damage/annihilate the less advanced civilizations as much as it is convenient for them. In the case of non-aggressive advanced civilizations, however, the possibility that they will integrate the less advanced ones only makes sense if those ones are not that inferior. That is, if the gap between the two civilizations is not very big, then it is realistic to expect that the superior civilization will push the inferior one to their own level, to some extent at least. In some cases, however, the non-aggressive advanced civilizations will encounter planets with primitive or very primitive civilizations, with an enormous gap (technologically, scientifically and genetically) between them. In particular, the differences between their brain capabilities and those of the primitive individuals could be pathetic. In these circumstances, it is completely unrealistic and naive to expect that the advanced individuals will try to integrate the primitive ones into their own civilizations. They rather will behave 'ecologically' towards them, treating them as sort of 'protected species' and not interfering (or only very discretely) with their natural evolution.

With this insight it is now much easier to accept the possibility that the Solar System could have been encountered or colonized many thousands, or even millions, years ago by, at least, one non-aggressive advanced civilization, who treated and still treat our planet as some protected natural reserve. As a matter of fact, they could have even brought many plants and animals to planet Earth, including our ancestors, presumably to improve their life conditions (they could have been in danger of extinction in their own planet, for example). Perhaps the Solar System has been visited by aggressive colonizers, as well as non-aggressive ones, resulting in battles or just pacific negotiations between them. Perhaps the aggressive losers will come back in the future, to try again

This view about ourselves, a small primitive civilization immersed in a large, advanced civilization, leads straightforwardly to the realization that we could find ourselves not among the typical intelligent observers of our galaxy, but only among a small proportion of primitive intelligent observers instead, completely ignorant of their low status. The typical intelligent observers would be the citizens of the advanced and very advanced civilizations who would 'own' the galaxy. But our galaxy is just

one typical galaxy from our observable Universe. This leads very naturally to our first proposal:

The Subanthropic Principle: We are not typical among the intelligent observers from the Universe. Typical civilizations of typical galaxies would be hundreds of thousands, or millions, of years more evolved than ours and, consequently, typical intelligent observers would be orders of magnitude more intelligent than us.

Observe that the Subanthropic Principle is almost equivalent to the proposal that, at present, all typical galaxies of the Universe are already colonized (or large regions of them) by advanced, or very advanced, civilizations, a small proportion of their individuals belonging to primitive subcivilizations, like ours. Whether the primitive subcivilizations know or ignore their low status will, most likely, depend on the ethical standards of the advanced civilization in which they are immersed. If the standards are low, the individuals of the primitive subcivilizations will be surely abused in many ways, in the same way that in our civilization large groups of human beings abuse other human beings in weaker positions, as well as animals in general. Therefore, in this case the primitive individuals will be painfully aware of their low status. If the ethical standards of the advanced individuals is high instead, then very probably they will respect the natural evolution (biological, social, cultural) of the primitive subcivilizations, treating them 'ecologically' as some kind of protected species. In this case, that we think could well describe the situation of the terrestrial civilization, the primitive individuals would be completely unaware of the existence of the large advanced civilization in which they are immersed.

Now there is an important remark: if the Solar System is part of the territory of an advanced civilization, why we do not detect any signal of civilization in any of the solid planets and large satellites in it? It would be most natural if they had built bases all along the Solar System (including underground and submarine bases in planet Earth) and maybe some colonies here and there on, or beneath, the surface of some solid planets and large satellites (this is exactly what we plan to do in the future ourselves!). The simplest answer would be that they do not find the Solar System attractive enough to live themselves and, as a consequence, they have only a few tiny bases difficult to detect. However, independently of whether or not they find the Solar System attractive to build colonies, we believe that all advanced civilizations must be necessarily aware of the existence of aggressive advanced civilizations and, as a result, they should have developed very sophisticated camouflage systems, so that no signals of civilization can be

detected by any external observers (neither by their space probes). Probably, in many cases they even manipulate and distort the global data of their planets (temperature, air composition, etc.), to fool external

observers for dissuasion purposes. *{It may sound strange that advanced civilizations would need to protect themselves against aggressors. However, there is not a single proof or indication that the ethical development of a civilization or an individual, grows in parallel with their level of material well-being or with their technological and scientific development. One may also argue that advanced aggressive civilizations must annihilate themselves, what seems a sensible guess. The crucial issue, however, is not whether they will annihilate themselves but how much damage they can produce to other civilizations (primitive as well as advanced) before they annihilate themselves.}*

This is the content of our second proposal:

The Undetectability Conjecture: Generically, all advanced enough civilizations camouflage their planets for security reasons, so that no signal of civilization can be detected by external observers, who would only obtain distorted data for dissuasion purposes. Observe that, if this conjecture turns out to be true, then we cannot be sure whether the terrestrial civilization is the unique civilization inhabiting the Solar System, as we firmly believe (this statement is independent, in fact, of whether or not our civilization is embedded in a large advanced civilization, we only needed to have 'advanced neighbours').

In fact, the inconsistency in the scientific reasoning used in the astronomical observations of planets and satellites is remarkable. One uses as input the non-proved assumption that, at the sources, there are no intelligent beings manipulating the data that we receive, and then one concludes that there is no signal of intelligent life, as the data prove. But this assumption could turn out to be wrong. The right claim would be in this case that there is no signal of primitive civilizations, like ours, who would allow themselves to be detected by external observers, but nothing can be said about the possibility of advanced civilizations, capable to fool our telescopes, detectors and space probes, and who would not allow themselves to be detected.

Finally, we must mention that the first scholar, at least in western history, who suggested that many stars out there could have planets similar to ours: with plants, animals, people, etc., was Giordano Bruno, in the 16th century. He claimed that the Sun was only one star among the many thousands, and therefore, like the Sun, many other stars would also have planets around and living beings inhabiting them[4]. To appreciate the genius of Giordano Bruno one has to take into account that he lived at the time when more than 99% of the intellectuals believed that the Earth was the centre of the Universe, and a few others, like Copernicus and Galileo, believed that it was the Sun, instead, the centre of the Universe, the stars being some bright heavenly bodies of unknown nature. *{For these and other ideas Giordano Bruno was imprisoned eight years and finally*

burned at the stake in Rome, in piazza Campo di Fiori, the 17th February 1600. The Catholic Church, which some years ago apologized for the treatment given to Galileo, has never apologized, however, for the treatment received by Giordano Bruno.}

Nowadays we know that the Universe has no centre and that our planet is only a tiny particle of dust in its immensity. In spite of this, for many human beings the Earth is still the centre of the Universe, the chosen planet inhabited by the most perfect and intelligent beings all over the Universe: the Crown of the Creation. (There are even regular scientists and 'intellectuals' who wonder whether the whole Universe was created just for us, terrestrial human beings, to exist!).

3 Conclusions and Final Remarks

We have discussed the possibility that our civilization could be embedded in a large advanced civilization spanning (at least) a large region of our galaxy. This should be expected, in fact, since in our galaxy there are many thousands of millions of stars much older than the Sun. Using two simple and natural assumptions we see that this possibility cannot be ruled out.

The first assumption explains why the members or citizens of the large civilization would not interact and socialize with us (openly and officially, at least). The reason would be that we do not qualify as full members, neither as associates, nor to be in the queue for applications, although we perhaps qualify as pets or 'little friends'. This situation we generalize, taking into account that we live in a typical galaxy, resulting in the Subanthropic Principle that states that we are not typical among the intelligent observers from the Universe, but much below the standards.

The second assumption, that we call the Undetectability Conjecture, explains why we do not detect any signals of this large civilization in which we would be immersed. The reason would be that, generically, all advanced civilizations are undetectable for security reasons, due to the existence of aggressive advanced civilizations. In any case, why would advanced civilizations allow alien civilizations to watch their cities, laboratories, military installations, etc., when they could fool them very easily instead?

The Subanthropic Principle is almost equivalent to the proposal that all the typical galaxies of the Universe are already colonized (or at least large parts of them) by advanced, or very advanced, civilizations, which is a most natural guess taking into account the very old age of many thousands of millions of stars which populate the typical galaxies. In these large advanced civilizations there would always exist, generically, a small percentage of individuals which belong to primitive subcivilizations. If the ethical standards of the advanced individuals are low, then the primitive

individuals will be abused in many ways (maybe even annihilated). If the ethical standards of the advanced individuals are high instead, then probably they will treat the primitive individuals in an ecological way; that is, like a protected species living in a natural reserve. In this case, which could well describe the situation of our civilization, most of the primitive individuals would completely ignore the existence of the advanced civilization in which they are immersed.

We have also argued that the idea of brane worlds, although still in very premature stage, could in fact aggravate enormously the 'missing-alien' problem pointed out first by Enrico Fermi. The reason is that, if other parallel universes exist with the same laws of physics than ours, it could happen that advanced civilizations could be technically able to 'jump' through the extra dimensions to our galaxy for expansion and colonization purposes. As a result, it could even happen that the 'owners' of the Solar System (if they exist) had come from another universe and had created a huge multidimensional empire, with large pieces of territory in several 'parallel' galaxies. It could also happen that advanced civilizations would find more efficient (cheaper, energetically preferable) to expand along extra dimensions than inside their own galaxy. Finally, in the Appendix we discuss the issue of possible contacts and interactions between advanced civilizations or individuals and primitive civilizations or individuals.

It seems very unlikely that non-aggressive advanced civilizations would 'introduce themselves' to any primitive civilization. Nevertheless, we have identified three major causes or reasons which could motivate individuals of advanced civilizations to seek interactions or relationships with primitive individuals: scientific purposes, entertainment purposes and criminal purposes. We also point out that the Subanthropic Principle and the Undetectability Conjecture predict a rather low probability of success for the SETI project, the reason being the low percentage of technological civilizations susceptible to be detected (the period of detectability of an average civilization could last less than 500 years).

Appendix

In what follows we will discuss the possible sources of contacts and interactions between advanced civilizations or individuals and primitive civilizations or individuals. As we argued in the preliminaries, it is very unlikely that a non-aggressive advanced civilization would contact any primitive civilization 'openly and officially' (at least until the latter reaches a remarkable degree of development that our civilization has not reached yet). Aggressive advanced civilizations, however, would 'introduce themselves' before, after, or during the strike, for their own convenience. (The fact that our civilization has never been attacked by aggressive aliens,

as far as history knows, could be indeed a clue that we belong to an advanced civilization which protects planet Earth, as part of its territory). If we now consider possible contacts and relationships between individuals of advanced civilizations and primitive individuals, rather than between their civilizations, many more possibilities appear. Trying to identify which advanced individuals could seek interactions or relationships with primitive individuals, and for which reasons, leads us to distinguish three main sources of contacts:

1) Scientific research by regular scientists related to life-sciences, such as biologists, medical researchers, anthropologists, sociologists, psychologists, etc. Whether or not the corresponding research activities could damage the primitive individuals (physically or mentally), would depend on the legal regulations of the advanced civilizations regarding ethical treatment towards individuals of primitive civilizations.

2) Entertainment, affection, etc. That is, one reason for an individual of an advanced civilization to establish contact with primitive individuals could be simply to have fun and relax. The advanced individual could have, with respect to the primitive individuals, the kind of feelings that push us to interact and play with cats and dogs and many other animal species. In addition, if in our planet there are millions of cat-lovers and millions of dog-lovers, and there are even snake, pig, and gorilla-lovers, it is most natural to expect that there may exist some terrestrial-human-lovers among advanced aliens. Why not? This would apply specially to those advanced individuals who must spend long periods of time working in primitive planets, living in underground or submarine boring bases, which surely would exist in our planet in the case that our civilization is embedded in a large civilization (the workers in the bases being the 'guards' or militars that take care of the planet).

3) Criminal purposes of all kinds, including activities by regular scientists which would be forbidden by their legal ethical regulations. We can imagine dozens of different criminal purposes for which the primitive individuals could be kidnapped, tortured and even killed, including abject topics such as 'high gastronomy' and sadist games. To be realistic, one only has to think of the treatment that some cruel human beings give to their victims, be either other human beings (often children) or animals. The point is that the ethical level of an individual, or a civilization, does not necessarily grow in parallel with their technological and scientific achievements, or with their level of material well-being.

In the case that our civilization is embedded in a large civilization, one of the tasks of the 'guards' living in the bases would be, undoubtedly, to chase away the human-hunters and other outlaws.

Regarding the SETI - search for extraterrestrial intelligence - project, if the Undetectability Conjecture turns out to be true, then SETI turns into SETPI: search for extraterrestrial primitive intelligence. The reason is that, in this case, only primitive civilizations could be detected by external observers. On the other hand, if the Subanthropic Principle is correct, then the primitive civilizations would be very scarce compared to the total amount of technological civilizations, and even more scarce would be the ones with an appropriate technological level to produce electromagnetic emissions to be detected by distant civilizations. (Observe that the period of 'detectability' of an average civilization could last less than 500 years). Therefore the probability for one primitive civilization to detect another one would be very small. For these reasons the Subanthropic Principle and the Undetectability Conjecture predict a rather low probability of success for the SETI project.

A last remark is that we have never done any investigation in the subject of alleged alien contacts. As a result we have essentially no opinion about the true or false alien nature of those circulating through the media. Nevertheless, we believe that it must be an impossible task to identify true alien contacts (if they exist at all) just by reading the reports given to, or written by, their terrestrial partners. The reason is that, for our intuition, the claims of civilizations much more advanced than us must necessarily sound ridiculous, hilarious, crazy, science fiction ideas. But the same would have happened if we had described our TV sets, our planes, our microwave ovens, our computers, etcto people only 100 years ago!. Let us also notice that many persons, including many scientists, have a very deep rooted reluctance and aversion to accept the possibility of the existence of extraterrestrial species much more advanced and intelligent than us, who could even visit our planet. We call this prejudice the 'Crown of the Creation Syndrome' (CCS), for obvious reasons. Curiously, whereas many religious persons are not CCS sufferers, many atheists are (one reason could well be that they grew in very religious families which implanted in their children's minds strong impressions of the greatness and uniqueness of the human species).

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REALITY CHECK: SPHERES ON MARS NOT FOSSILS

By **Robert Roy Britt**, Senior Science Writer posted: 07:00 am ET 11 February 2004

Mars has a long history of being misinterpreted, from conjurings of apparent canals that signalled an alien civilization to the infamous NASA photo of a supposed giant face. Now a close-up picture of tiny spheres embedded in a Martian rock has some people seeing fossilized life.

This alternate, perhaps hopeful view of a picture taken by NASA's Opportunity Rover and released Monday has been expressed in e-mail messages to reporters and geologists. Mission scientists anticipated it and were ready yesterday with a response.

While the spherules, as the small structures are called, are incredibly interesting, they are not *that* incredible, according to Steven Squyres, principal investigator for the Mars Exploration Rover (MER) project from Cornell University.

"There simply is no reason to promote a biological origin for these [spherules] when there are so many other, far more probable ways of making them," Squyres told *SPACE.com*.

Squyres quoted his former teacher and friend, the late Carl Sagan, who popularized the phrase, "Extraordinary claims require extraordinary evidence."

"To claim a finding of fossils on Mars would certainly be extraordinary," Squyres said, "yet there are many different and very

ordinary ways in which Nature makes spherical objects of this size by non-biological processes."

WATER, MAYBE

The rover mission is designed to learn whether Mars was once warmer and wetter -- as most scientists believe -- a place that might have supported some form of very simple, microbial life. The spherules, after further investigation, may point in that direction. But water does not equal life, it only sets the stage.

Asked if, prior to getting these first close-up images of a Mars rock, he had harboured any hope of finding fossilized life on Mars, Squyres replied: "Never."

"Even on Earth, which has been a warm and life-friendly planet for nearly all of its history, macroscopic fossils [the sort that would show up in a rover image] don't turn up in any real abundance in the geologic record until about 600 million years ago - - less than 15 percent of the planet's history," Squyres explained. "To expect that life could have evolved to that level of complexity in what might have to be less time, on what has surely been a more hostile planet, would be asking far too much."

The spherules are a few millimetres in diameter -- much bigger than a typical bacterium, which would be the sort of thing scientists would expect to find on the red planet if there is any life there.

The spheres are almost surely of a different composition than the rock in which they are embedded, a preliminary analysis showed. Scientists hope to determine what they are made of in coming days with tests by multiple rover instruments. The tiny beads are thought to have formed in one of three ways:

- Ash from a volcanic eruption was suspended in the air, stuck together, and fell from the sky.
- Molten rock from a volcano or a meteor impact froze in mid-air into glass beads.
- Fluid, possibly water, carried dissolved minerals through a rock and "precipitated" grains that grew into spheres, through a process called "concretion."

The last possibility most excites geologists, but more study is needed to determine which of the hypotheses is correct.

STRANGE COLOURS

In one strangely coloured image of Stone Mountain, the smallish rock with the outsized name in which the spherules are embedded, other spherules are seen scattered about in the surrounding soil.

The radical colour enhancement -- done purposely to bring out differences in composition between the rock's primary makeup and that of the spheres -- gives the spheres an eerie, perhaps even lifelike appearance. But the colours are not real. In a true-colour image of the same scene, the spheres are unremarkable.

Stone Mountain is part of a modest outcropping roughly the height of a single stair step. There is a depressed region at its base -- a shallow crater -- and a higher plateau above. It is not known where the scattered spherules came from.

"It's impossible to know the pedigree of the ones that we see in the soil," Squyres said. "Some of them certainly must have weathered out of the outcrop, but many of them may be from elsewhere, including materials above the outcrop and outside the crater that we haven't been to yet."

Squyres had expected to be asked about whether the spherules were fossils. So he had asked a colleague, Andrew Knoll of Harvard University, to draft a more lengthy explanation for their non-biological origin.

NOT BIOLOGY

"Some small organisms [on Earth] are spheroidal, but not all small spheroidal structures are organisms," Knoll writes. Extraterrestrial structures or chemical signatures can be accepted as biological "only if we can rule out formation by physical processes -- the idea being that while life might vary from planet to planet, physics and chemistry should not."

Knoll continues: "We know that physical processes make structures like those seen in the images," adding that "we do not know of any cells on Earth" that would form fossils that look, in detail, like the structures seen in the Opportunity photograph.

Spherical fossils this big -- a few millimetres in diameter instead of microscopic -- are relatively rare," Knoll explains. And cells do not fossilize as whole, solid structures.

Responding to a specific suggestion that the rover had found small creatures called diatoms, Knoll said: "This is impossible," citing several observed characteristics of the spherules that don't match up.

The spherules are solid or mostly solid, Knoll writes, with holes interpreted to be small cavities known to geologists as vesicles. "This is not a likely consequence of biology."

Source:

http://www.space.com/missionlaunches/opportunity_spheres_040211.html



LETTERS

Dear Sir,

The hundredth 'exoplanet' has recently been discovered and currently both the United States and the European Union have probes on Mars which seem to have found the conditions for water, leading to much discussion as to whether there is or ever was life of any kind there or elsewhere in the universe.

'Life' of course, could mean something microscopic with a basic nerve system, or something much larger with intelligence up to or surpassing that of Man. If the latter is ever discovered what would it look like?

The main opinion amongst scientists seems to be that conditions on other planets would be so different that all life there would look very different from that on earth. And yet, is that necessarily so? Here on earth most animal life consists of a head, a body and limbs, with or without fingers and toes. It seems to be the optimum design here, and if here, why not wherever life appears?

In addition to a safe housing for a brain, intelligent life which has achieved technical ability will have needed legs to get around the planet and arms with hands and fingers to manipulate tools. How many of each might well vary of course -- and I've always thought that the Centaur design of four legs and two arms would be a good one -- but the basics of head, body and limbs would surely be repeated wherever life occurred.

However, I am not a scientist and would welcome a discussion on this.

Regards
Sonya Porter

Members who wish to express any opinions, ideas or comments are invited to write to Pegasus at the address on page 2. We reserve the right to edit any submission for reason of space. Ed.

UFOS AND CLASSIFIED AIRCRAFT: SHEDDING NEW LIGHT ON DARK SECRETS

By Leonard David, Senior Space Writer, posted: 07:00 am ET, 15 August 2001

WASHINGTON -- They are big, fly in the dark, and look otherworldly.

For years, people have reported black triangle-shaped craft floating through night time skies. These vehicles are claimed by some as proof that Earth is a tourist off-ramp for visitors from afar. But a more terrestrial, less cosmic, modus operandi may be at work.

New data collected by a group studying purported unidentified flying objects (UFO) is peeling away mystery to find a pattern.

And if you think the skies are full of wild, weird and wondrous things now, wait a few years.

Clustered and correlated

For the last several years, the National Institute for Discovery Science (NIDS), based in Las Vegas, Nevada, has been amassing both historical and recent eyewitness accounts of "triangular" object sightings.

"Calls regarding low-flying triangular objects have been coming in pretty steady for the last 18 months," said Colm Kelleher, deputy administrator for NIDS. "People are describing essentially similar objects in different areas of the country," Kelleher told SPACE.com. Kelleher said that NIDS has compared its research with triangular/deltoid craft sightings recorded by the Mutual UFO Network (MUFON) and those of investigator Larry Hatch, who currently manages one of the largest UFO databases in the world.

Taking the three independent UFO data sets, NIDS plotted the sighting locations on maps of the United States.

Military focal points

Kelleher said that a lot of the sightings appeared to fall into a broad trend.

Sightings of the triangular objects could be clustered and correlated with a small subset of United States Air Force bases. That subset can be tied to air corridors between Air Force Materiel Command (AFMC) and Air Mobility Command (AMC) bases around the country.

For instance, Wright-Patterson Air Force Base, Headquarters AFMC in Dayton, Ohio seems to be a focal point. Scott Air Force Base, Headquarters AMC, near O'Fallon, Illinois runs a close second.

The fact that, specifically, AFMC or AMC bases appear to be associated with hundreds of triangular object sightings has led NIDS experts to speculate that these "unacknowledged aircraft" are large troop or material carriers.

IFO info

A vast majority of the triangular-shaped vehicles have been seen only after dark, Kelleher said.

"We are encouraging more people to call in their observations. Right now, what we have is an apparent correlation. People living close to some of these bases can help us close the loop, reporting objects either taking off or landing. That's data we don't have," he said.

The hope of NIDS is to move the unidentified triangular objects into the identified flying object (IFO) realm.

"These objects are being lumped in with the UFO category," Kelleher said. "If we can definitely, to our satisfaction, show a lot of evidence that these are unacknowledged aircraft from the U.S. military and that they fly between these bases, then we don't have to spend a huge amount of time on that.

"Then we can transfer 20 percent of our database from the UFO to the IFO category. That's a fairly big jump," Kelleher said. "We're not a hobby club looking into exotic aircraft. We're investigating the UFO phenomenon."

In June, NIDS announced that newly printed Federal Aviation Administration (FAA) manuals have cited the research group as the sole contact point in the United States to which the FAA reports UFOs.

Novel airship

If the triangle-shaped, high-tech craft are "ours" -- and not out-of-this-world wizardry -- then what are they?

William Scott, a reporter for the aerospace magazine *Aviation Week & Space Technology*, has cast his investigative eye on reports of odd craft for many years.

Scott has written about sightings of large triangular craft in the early 1990s around Edwards Air Force Base in California. Also, airline pilots saw a similar vehicle scooting along at high altitude over the southwestern United States.

Scott and others think that people are witnessing a large, hard-shell, near-neutral buoyancy carrier aircraft. The Pentagon would not confirm the existence of such an aircraft, he said.

While not a true airship-like blimp, it is gas-filled. This lightweight and enormous craft also sports a sizeable internal capacity. That makes it ideal for hauling troops and lots of equipment from point-to-point.

The recent NIDS study and its "apparent correlation" of black triangle objects with types of military bases are a nice fit with this speculation.

Singled-out as the likely builder of numerous iterations of the triangular carrier is Lockheed Martin Aeronautics Company.

That firm is no stranger to strange, novel, and exotic aircraft.

Lockheed Martin is the mega-firm that encompasses the work of the legendary Skunk Works team. Those are the folks that put into the air the U-2, the super-speedy Blackbird, and the F-117A stealth fighter, and always rumoured to have pioneered a host of highly classified concepts, including Aurora -- a supposed hypersonic spyplane.

The diversified military and civilian aerospace company is into lighter-than-air platforms too.

Amongst the organization's many divisions, Lockheed Martin Naval Electronics & Surveillance Systems in Akron, Ohio, is a supplier of aerostats, large controllable balloons, as well as larger airships.

Green on black programs

Bill Sweetman, who specializes in writing about mystery aircraft, looks back to the days of President Ronald Reagan's White House as the source of the momentum that led to a series of high-tech aircraft. The black side of military technology got a big boost. Monies started to flow into classified projects in the early 1980s.

"Everything takes some time to design and build, so it is some years later, after 1985, that the Area 51 complex starts to expand as seen in all the satellite photos," Sweetman told SPACE.com.

One outcome from budget increases, Sweetman suspects, were very large, slow-flying vehicles that could be likened to aerostats or semi-aerostat vehicles.

The advantage of an aerostat is an ability to haul a huge antenna -- a great tool for bugging or detecting targets. The antenna size would be far larger than anything feasible for installation on an ocean-going ship, or even toted by a heavier-than-air aircraft, Sweetman said.

Sky-high traffic

Sweetman adds a cautionary note. The majority of the public has trouble discerning types of planes, one from another.

"Inexperienced observers, if they do see something unusual, will generally remember major features wrongly and utterly misjudge the object's size. This is of great help if you are trying to conceal developments in technology and a huge hindrance if you are trying to ferret them out," Sweetman said.

Even if Sweetman is right, the skies are going to be littered with wildly shaped flying vehicles for years to come.

A best guess is that eye-catching craft are sure to keep UFO study groups on their toes.

There are all sizes and shapes of openly discussed remotely piloted vehicles (RPVs), robot drones, and other strange looking aerial craft being readied for flight or on the drawing boards. Numerous aerospace firms see a big business boom for these types of aircraft. Also being commercially offered are wedge-shaped hybrid air vehicles that are akin to huge dirigible airships of the past. They are marketed as being capable of carrying large cargo and zipping along at high speed.

Take all this non-secretive work ... then add the truly classified, hush-hush stuff.

One wonders if there will be any air space left for our UFO buddies

Source:

http://www.space.com/business/technology/classified_aircraft_010815-1.html



"Aliens? UFOs? It's all pie in the sky..."

CHINESE SCIENTISTS TO INVESTIGATE ET PYRAMID/PIPE RELICS

Peoples Daily, 2-15-4 (www.peopledaily.com)

A group of nine Chinese scientists will go to west China's Qinghai Province this month to closely examine the relics thought by some to have been left by extraterrestrial beings (ET). It will be the first time scientists seriously study the mysterious site near Delingha City in the depths of the Qaidam Basin, according to government sources with the Haixi Mongolian and Tibetan Autonomous Prefecture, where Delingha is located. The site, known by local people as "the ET relics", is on Mount Baigong about 40 kilometres to the southwest of Delingha City. On the north of the mountain are twin lakes dubbed as the "lover Lakes", one with fresh water and the other with salty water.

"ET" PYRAMID, CAVES AND PIPES

The so-called ET relics structure is located on the south bank of the salty lake. It looks like a pyramid and is between 50 to 60 metres high.

At the front of the pyramid are three caves with triangular openings. The cave in the middle is the biggest, with its floor standing two metres above the ground and its top eight metres above the ground.

This cave is about six metres in depth. Inside there is a half-pipe about 40 centimetres in diameter tilting from the top to the inner end of the cave. Another pipe of the same diameter goes into the earth with only its top visible above the ground. Above the cave are a dozen pipes of various diameters which run into the mountain.

All the pipes are red brownish, the same colour as that of surrounding rocks. The two smaller caves have collapsed and are inaccessible. Scattered about the caves and on the bank of the salty lake area are a large number of rusty scraps, pipes of various diameters and strangely shaped stones. Some of the pipes run into the lake.

According to Qin Jianwen, head of the publicity department of the Delingha government, the scraps were once taken to a local smeltery for analysis. The result shows that they are made up of 30 per cent ferric oxide with a large amount of silicon dioxide and calcium oxide. Eight per cent of the content could not be identified.

"The large content of silicon dioxide and calcium oxide is a result of long interaction between iron and sandstone, which means the pipes must be very old," said Liu Shaolin, the engineer who did the analysis. "This result has made the site even more mysterious," Qin said. "Nature is harsh here. There are no residents, let alone modern industry in the area, only a few migrating herdsmen to the north of the mountain."

Someone has suggested that the site might have been a launch tower left by ET. The area is high in altitude, with thin and transparent air. It is an ideal place to practice astronomy, Qin said.

In fact, the Purple Mountain Observatory of the Chinese Academy of Sciences has a large radio telescope just 70 kilometres from the site. Yang Ji, a research fellow at the observatory, said the hypothesis of ET relics is understandable and worth of looking into.

"But scientific means must be employed to prove whether it is true," he added.

NEWS IN BRIEF/ SIGHTINGS ROUNDUP

BRISTOL -- On Sunday, February 8, 2004, just after midnight, Tim Lock was outdoors in the woods at Wraxall and Failand when "approaching from the northwest came a white light with a red tinge piloting above the trees, moving sharply about but hovering over the same area, as if it had lost something. It moved up, down, forward, backward, up, down, forward and so on. Tim says, "We, also, saw three smaller shooting-star objects shoot about under it from the left at about 15 minute intervals." Tim and his companions kept the strange object in view until 2 AM, until he fell asleep. "I filmed it on my camcorder, and my mother and girl friend, also, observed it. It was real white with a halo around it that was fuzzy.

LEEDS --On Tuesday, February 10, 2004, Raymond Mulhall, 17, spotted a UFO over Meanwood in the UK. "This sighting was witnessed by 8 people, two of whom were policemen. The object was about 50 feet (15 meters) across and 20 feet (6 meters) high. It moved across the sky without a single noise.

It appeared to land in an area nicknamed the Witches Quarry." "An hour later," Ray reported, "I arrived at the Witches Quarry and found damaged trees and three triangular depressions in the ground. These were 25 feet (7.7 meters) apart and depressed into the ground to a depth of 8 inches (20 centimetres). There was a strange heat emanating from the ground that I found rather creepy, so I left and returned home." Thanks to Editor: Joseph Trainor, UFO Roundup Vol. 9, # 7 Feb.18, 2004 E-mail: Masinaigan@aol.com Website: <http://www.ufoinfo.com/roundup/>

Glowing Saucer Photographed Over Plymouth, UK 2-19-4 - An amazing photograph snapped over Plymouth is being called one of the best pictures of a UFO ever taken.

A city-based amateur photographer captured the image when he was trying out his new hi-tech digital camera at night. It shows what can only be described as an 'unidentified flying object' hovering above St Budeaux.

Another, equally stunning, snap shows the same brightly-illuminated object tilted at a different angle.

UFO experts are highly excited by the pictures and the Royal Navy today asked the Herald to supply them with the photos - because they want to study them.

Plymouth-based UFOlogist Bob Boyd has called the snaps among the 'best five' pictures of a UFO he has ever seen - in 25 years of spotting the phenomena. Mr Boyd, chairman of the Plymouth UFO Research Group, said: "It's the real thing."

He claimed the picture had been examined by a photographic expert who confirmed it was genuine.

The man who took the photograph, a dockyard worker living in St Budeaux, didn't realise what he had snapped until he got home and inspected his pictures.

A Plymouth City Airport spokesman said it was 'highly unlikely' it was a commercial flight. Mr Boyd does not know of anybody else reporting the UFO, but said: "That doesn't mean nobody saw it."

<http://www.thisisplymouth.co.uk/>

UNDER THE MICROSCOPE - AFTER the miserable loss of the British Beagle 2 Mars Lander, the European Space Agency (ESA) can be forgiven for crowing about the success of its Martian orbiter - a box of gubbins called Mars Express. But can this excuse some of the stories that have emerged recently?

For example, 10 days ago we learned that Mars Express had "discovered water" on Mars for the first time. This must have been about the dozenth time water has been "discovered" on Mars.

The astronomer Cassini saw ice at the poles in 1666 (though he had no way of proving it was water ice, of course). In the 1970s Nasa's Viking probes measured the temperature of the Martian ice caps and showed conclusively that the hulk of them could not be frozen carbon dioxide - dry ice - as had been thought by some scientists. Instead they must be made of water.

Then in 2002 another Mars probe called Odyssey used a gamma ray spectrometer to detect huge quantities of water ice all over the Martian surface. This was duly reported in the press - once in March and again in the summer. Each time it was the same: "Water found on Mars!"

Given that coloured lens filters have also been used to make pictures of the Red Planet look redder, or bluer, these days even Mars isn't immune from being "sexed up", it seems.

Source: 'Boffin', Private Eye no.1099, Feb 2004

FLORIDA - PILOT SIGHTING REPORT - My first sighting happened in 1961, on a trip from Tampa, Fla. to Atlanta, Ga. It was a night flight and we had leveled off at our assigned altitude and were approximately 40 miles north of Tampa. We suddenly observed a flight of four star-like objects heading south, high above us and to the east, going very fast. They were in tandem and were surrounded by a bluish-white haze or glow. We called on Miami Center frequency and asked if anyone else was seeing these objects. Immediately, an Aero Commander aircraft crew said, "Yes, we are over Vero Beach and we have them in sight." Miami Center switched us over to Jacksonville Center at this time.

After our initial call into Jacksonville Center, we asked if the controller had been getting any reports of UFOs. He replied that he had numerous reports and that the Air Force had scrambled jet fighters to attempt to catch them, but had failed to get close to them. He also mentioned that there had been many sightings all along the east coast of the U.S. from as far north as Richmond, Va. My estimate of their speed was something over 2000 mph and their altitude above 35,000 ft. We observed them about 30-45 seconds. After completing the trip and driving home, I turned on the radio to hear the latest news. The announcer said that according to a U.S. Air Force report, the mysterious objects seen in the eastern and southern states

tonight, were meteors. I say, "Meteors, they were NOT". I knew I had seen my first UFOs and what a thrill it was. Thanks to Brian Vike, Director HBCC UFO Research hbccufo@telus.net Website: <http://www.hbccufo.com>

LIFE ONCE EXISTED ON MARS; SAY AUSTRALIAN SCIENTISTS - Australian scientists believe they have found evidence that life once existed on Mars. They have found that microscopic fossils of primitive bacteria-like organisms in a Mars meteorite match characteristics of bacteria found in mud in Queensland. The research is published today in the Journal of Microscopy.

One of the scientists, Dr. Tony Taylor, from the Australian Nuclear Science and Technology Organization, says he expects his work will spark intense debate.

"The fossils that we have in the meteorite are the original material - the only difference is that you need a very high-powered electron microscope to image them, to see them, and basically whenever we find these fossils here on Earth, no one ever questions they were made by bacteria," he said. "The only difference is that it was in a meteorite from Mars." Dr. Taylor says he has found enough evidence of life on Mars to warrant a manned mission to the red planet, and that more samples must now be collected from Mars for further investigation. "We've now got enough evidence to warrant a sample retrieval mission and I believe it's going to be a matter of developing the technology to get authentic pieces of Mars back here on Earth, where we can subject them to the really high-tech high resolution instruments that you can't possibly put on Mars," he said.

<http://www.abc.net.au/news/newsitems/s1033640.htm>

SMALL UFO APPROACHES THE SPACE STATION - "The Russian-United States crew aboard the International Space Station (ISS) has reported an unidentified object outside their orbiting craft, said space officials on Tuesday," February 10, 2004.

"U.S. astronaut Michael Foale and his Russian colleague Alexander Kaleri last week observed 'a 20-centimetre (8-inch) long strange object of soft material,' which was floating in space, said a NASA representative in Russia, Sergei Puzanov."

"For the moment, it's not clear what it is. U.S. and Russian experts are studying photos sent by the (ISS) crew to Earth to

try and determine its origin,' he said, adding that it posed 'no danger to the station or its crew.'

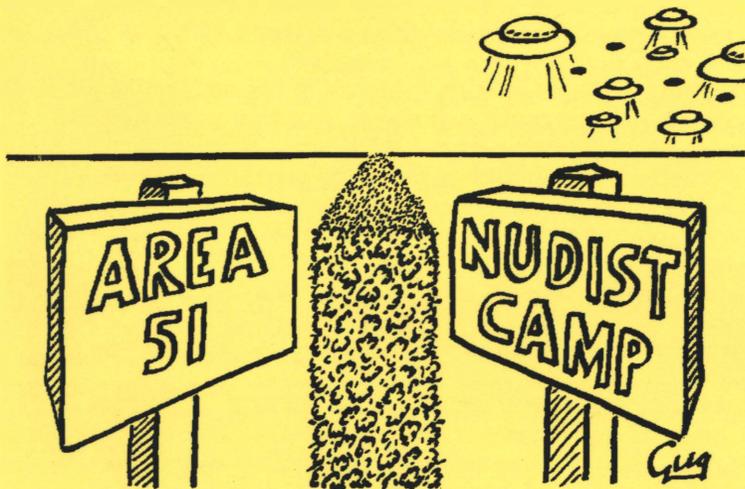
"It could be a piece of the station's insulation or a strap used to attach some technical equipment to the outside of the station, according to Russian experts quoted by the Interfax news agency."

"It is possible we will never manage to find out what it was,' said a spokesman for Russian mission control in Moscow, Valery Lyndin."

"According to Lyndin, there was a similar incident on the now-scrapped Russian space station Mir."

"The cosmonauts saw 'a shining object' which they filmed, but experts who studied these images 'were unable to establish what the object was,' he added."

(See the Interfax report for February 10, 2004, "Something's out there." Many thanks to Jim Hickman for this news story. And don't forget to visit Jim's Web site, The Hickman Report, at <http://www.thehickmanreport.com>)



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The views expressed in Pegasus are those of the articles' authors and are not necessarily those of the editor, or of SIGAP.

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