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CLOSE ENCOUNTER
WITH DR. J. ALLEN HYNEK

#### **MUFON UFO JOURNAL**

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## FROM THE EDITOR

Is it just my imagination, or are things heating up in the UFO field? Certainly it seems like there is more happening every month than we are able to cram into each issue of the Journal! Still, we are doing our best (and that's a collective best) to bring you both the best and the most up-to-date news in the world of ufology. We like to think we earn your respect and subscription the old fashioned way: by earning it. But we'll never know if you don't tell us, so please let us hear your comments and criticisms.

In the meantime.....Jerome Clark, associate editor at FATE magazine, is the new editor of the International UFO Reporter. He will have a review of SKY CRASH in the April issue of FATE. Walt Andrus will soon be giving us an update of Lucius Farish's role in the same Rendlesham Forest affair and we also hope to have a progress report by Jenny Randles, one of the original authors.

In the immediate future we can look forward to the St. Louis MUFON Symposium (make your reservations now) and National UFO Week, both scheduled for this summer and both worthy of your support. Meanwhile, between this issue and the next we have lots to offer, including my own interview with Dr. J. Allen Hynek, articles by Michael Swords and James McCampbell, artwork by Simone Mendez, a clever cartoon or two by Leonard Bruce, and letters by your, our readers.

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### CLOSE ENCOUNTER WITH DR. J. ALLEN HYNEK

## by DENNIS STACY

#### AN INTERVIEW WITH THE DEAN

For over two decades, from 1948 to 1969, Dr. J. Allen Hynek was a consultant in astronomy to the United States Air Force. The subject of his advice, however, was not the fledgling space program or even the moon and stars above, but Unidentified Flying Objects, UFOs, or "flying saucers," as they were popularly called: those ghostly lights that went zip in the night and generally scared the hell out of a populace still suffering World War II shellshock and confronting the atom bomb, while peering anxiously into the future of Cold War politics.

As a scientist, Hynek's credentials were unassailable. In 1935, he had received his doctorate in astrophysics from the University of Chicago and moved directly into his first teaching position at Ohio State University. He was an astronomer at the University's Perkins Observatory when he was recruited by the Air Force. Later, Hynek would be a Visiting Professor at Harvard, Chief of the Section of Upper Atmosphere Studies and Satellite Tracking, and the Associate Director of the Smithsonian Astrophysical Observatory. From 1960 until his retirement from academia in 1975, he was Chairman of the Department of Astronomy and Director of Dearborn Observatory, Northwestern University.

As a UFO skeptic, however, Hynek turned out to be a complete flop. His experiences with Air Force Projects Sign, Grudge and Blue Book inevitably convinced him that there was more to the UFO phenomenon than could be handily swept under the carpet of private secrecy and public ridicule that was military policy. In short, he became a "believer."

Hynek's Road to Damascus has hardly been smooth and paved with money, however, as the following interview reveals. He has had to suffer his own share of peer ridicule and economic stress in a search for



DR. J. ALLEN HYNEK

-Dennis Stacy

answers.

In 1972, drawing on his Blue Book experiences and copius files, Hynek published *The UFO Experience: A Scientific Irquiry*, containing his classification of UFO encounters, the Third Kind of which Stephen Spielberg later branded indeliby in the public mind. In 1973, he founded the Center for UFO Studies (CUFOS) and today serves as Director and the editor of its journal, "International UFO Reporter."

STACY: Dr. Hynek, as a scientist, you be back as far with the UFO phenomenon as probably anyone alive today. Exactly how did that relationship begin?

HYNEK: That's an easy story to tell. In the spring of 1948, I was teaching astronomy at Ohio State University, in Columbus. One day three men, and they weren't dressed in black, came over to see me from Wright-Patterson' Air Force Base in nearby Dayton. They started out by talking about the weather, as I remember, and this and that, and then finally one of them asked me what I thought about "flying saucers."

I told them I thought they were a lot of junk and nonsense and that seemed to please them, so they got down to business. They said they needed some astronomical consultation because it was their job to find out what these flying saucer stories were all about. Some were meteors, they thought, others stars and so on, so they could use an astronomer. What the hell, I said, it sounded like fun and besides, I would be getting a top secret security clearance out of it, too.

At that time, it was called Project Sign, and some of the personnel at least were taking the problem quite

#### HYNEK, Continued

seriously. At the same time a big split was occurring in the Air Force between two schools of thought. The serious school prepared an estimation of the situation which they sent to General Vandenburg, but the other side eventually won out and the serious ones were shipped off to other places. The negatives won the day, in other words.

My own investigations for Project Sign added to that, too, I think, because I was quite negative in most of my evaluations. I stretched pretty far to give something a natural explanation, sometimes when it may not have really had it. I remember one case from Snake River Canyon, I think it was, where a man and his two sons saw a metallic object come swirling down the canyon which caused the tops of the trees to sway.

In my attempt to find a natural explanation for it, I said that it was some sort of atmospheric eddy. Of course, I had never seen an eddy like that and had no real reason to believe that one even existed. But I was so anxious to find a natural explanation because I was convinced that it had to have one that, naturally, I did. In fact, it wasn't until quite some time had passed that I began to change my mind.

STACY: Was there ever any direct pressure applied by the Air Force itself for you to come up with a conventional explanation to these phenomena?

**HYNEK:** There was an implied pressure, yes, very definitely.

STACY: In other words, you found yourself caught, like most of us, in a situation of trying to please your boss?

HYNEK: Yeah, you might as well put it that way, although at the same time I wasn't going against my scientific precepts. As an astronomer and physicist, I simply felt a priori that everything had to have a natural explanation in this world. There were no ifs, and or buts about it.

The ones I couldn't solve, I thought if we just tried harder, had a really proper investigation, that we probably would find an answer for. My batting average was about 80 per cent and I

figured that anytime you were hitting that high, you were doing pretty good.

That left about 20 per cent unsolved for me, but only about three or four per cent for the Air Force, because they used statistics in a way I would never have allowed for myself. For example, cases labeled as "insufficient information" they would consider solved!

They also had some other little tricks. If a light were seen, they would say, "aircraft have lights, therefore, probable aircraft." Then, at the end of the year, when the statistics were made up, they would drop the "possible" or "probable" and simply call it an aircraft.

**STACY**: What began to change your own perception of the phenomenon?

HYNEK: Two things, really. One was the completely negative and unyielding attitude of the Air Force. They wouldn't give UFOs the chance of existing, even if they were flying up and down the street in broad daylight. Everything had to have an explanation. I began to resent that, even though I basically felt the same way, because I still thought they weren't going about it in the right way. You can't assume that everything is black no matter what.

Secondly, the caliber of the witnesses began to trouble me. Quite a few instances were reported by military pilots, for example, and I knew them to be fairly well-trained, so this is when I first begin to think that, well, maybe there is something to all this.

The famous "swamp gas" case which came later on finally pushed me over the edge. From that point on, I began to look at reports from a different angle, which was to say that some of them could be true UFOs.

STACY: As your own attitude changed, did the Air Force's attitude toward you change, too?

HYNEK: It certainly did, quite a bit, as a matter of fact. By way of background, I might add that the late Jim McDonald, a good friend of mine who was then an atmospheric meteorologist at the University of Arizona, and I had some fairly sharp words about it. He used to accuse me very much, saying you're the scientific consultant to the Air Force, you should be pounding on generals' doors and

insisting on getting a better job done. I said, Jim, I was there, you weren't. You don't know the mindset.

They were under instructions from the Pentagon, following the Robertson Panel of 1953, that the whole subject had to be debunked, period, no question about it. That was the prevailing attitude. The panel was convened by the CIA, and I sat in on it, but I was not asked to sign the resolution. Had I been asked, I would not have signed it, because they took a completely negative attitude about everything.

So when Jim McDonald used to accuse me of a sort of miscarriage of scientific justice, I had to tell him that had I done what he wanted, the generals would not have listened to me. They were already listening to Donald Menzel and the other boys over at the Harvard Astronomy Department as it was.

STACY: Did you think you would have been shown the front door and asked not to come back?

**HYNEK**: Inside of two weeks I imagine. You're familiar with the case of Tycho Brahe and Johannes Kepler from the history of astronomy? Brahe had the observations and didn't know what to do with them, and Kepler, who was nearsighted and couldn't make the observations, did. So essentially, I played Kepler to the Air Force's Tycho Brahe, I knew the Air Force was getting the data and I wanted a look at it, so I made very full use of the copying machines at Wright-Patterson, I kept practically a duplicate set of records because I knew that someday that data would be worth something.

Toward the end, however, I was barely speaking with Major Quintanilla, who was in charge. We had started as really good friends and then things got very bad because he had one lieutenant who was such a nincompoop, it seemed to me. Everything had to be Jupiter or Venus, or this or that. You have no idea what a closed mind, what a closed attitude it was. I kept doggedly on, but I can safely say that the whole time I was with the Air Force we never had anything that resembled a really good scientific dialogue on the subject.

#### HYNEK, Continued

**STACY**: They weren't really interested in an actual investigation of the subject then?

HYNEK: They said they were, of course, but they would turn handsprings to keep a good case from getting to the attention of the media. Any case they solved, they had no trouble talking to the media about. It was really very sad.

I think their greatest mistake in the early days, however, was not turning it over to the universities or some academic group. They regarded it as an intelligence matter and it became increasingly more and more embarrassing to them. After all, we paid good tax dollars to have the Air Force guard our skies and it would have been bad public relations for them to say, yes, there's something up there, but we're helpless. They just couldn't do that, so they took the very human action of protecting their own interests. What they said was that we solved 96 per cent of the cases and that we could have solved the other four per cent if we had just tried harder.

STACY: Was it the famous Michigan sightings of 1966, explained away as "swamp gas" that finally did lead the Air Force to bring in a reputable university?

HYNEK: Yes, that, as you know, became something of a national joke and Michigan was soon being known as the "Swamp Gas State." Eventually, it resulted in a Congressional Hearing called for by then state Congressman, Gerald Ford, who of course later went on to become President. The investigation was turned over to the Brian O'Brien Committee who did a very good job. Had their recommendations been carried out, things might have turned out much better than they did.

They recommended that UFOs be taken away from the Air Force and given to a group of universities, to study the thing in as wide a way as possible. Well, they didn't go to a group, they went to a university and a man they were certain would be very hard-nosed about it, namely, Edward Condon at the University of Colorado. That was how the Condon Committee and



DR HYNEK

-Dennis Stacy

eventually the Report came to be.

STACY: Were you ever called on to tesify before, or advise the Committee?

HYNEK: In the early days they called on me to talk to them, to brief them, but that was the extent of it. They certainly didn't take any of my advice.

STACY: By 1968, the generally negative Condon Report was made public and the Air Force used its conclusions to get out of the UFO business. Were you still an official advisor or consultant at that time?

HYNEK: Oh, yes, I was with the Air Force right up until the very end, but it was just on paper. No one had cut the chicken's heat off yet, but the chicken was dead. The last days at Blue Book were just a perfunctory shuffling of papers.

STACY: In terms of the UFO phenomenon itself, what was going on about this time?

HYNEK: Well, as you know, the Condon Report said that a group of scientists had looked at UFOs and that the subject was dead. The UFOs, of course, didn't bother to read the report and during the Flap of 1973, they came back in force.

It was at that time that I just got totally disturbed. It seemed to me that from the scientific point of view a lot of data was being lost, washing down the drain. Nobody was minding the store anymore. So instead of just waving my hands in the air, I said let's do something and make a Center for UFO studies.

And in that year, 1973, I wrote to the three existing UFO organizations pointing out that the Center was to be an association of scientists to study the subject and that we had no field investigators of our own. We did have a police UFO hotline, however, that Northwestern University had helped us set up, and I said that I would like to do it this way: that whenever we got a good report, we would call one of the UFO organizations with the closest

#### HYNEK, Continued

investigator. Their man would then go into the field, investigate, and file a report with the parent organization. All we wanted in turn was a copy of the report for our own files. I didn't want an organization that would be in competition with the others. Since then we've added a few investigators of our own, probably less than a hundred altogether.

What happened then, though, was kind of interesting. The Aerial Phenomena Research Organization, (APRO) was afraid that we would turn their list of field investigators over to the Mutual UFO Network (MUFON), which was a splinter group at that time; and the National Investigation Committee on Aerial Phenomena (NICAP) said, sorry, but according to our charter, NICAP investigators can report only to NICAP. Walt Andrus, of MUFON, was the only one to see the light and say, yes, he would do it. But even he had a hard time getting it past his Board of Directors.

STACY: Probably your biggest contribution to the public's awareness of the UFO phenomenon was your classification system, culminating in the Stephen Spielberg box-office smash movie, "Close Encounters of the Third Kind." How did you come to arrive at such a system?

HYNEK: About 1970, right after the Air Force fiasco, I thought it would be interesting to write up some of my experiences. In writing up the Air Force cases I first of all divided them into two separate groups. I wasn't going to assume any kind of classification that would depend on a theory of origin. I wanted something that was completely observational in nature.

Well, the first obvious observation was, did you see it far away from you or close up to you? I chose to call near sightings, say within 500 feet, Close Encounters. Then quite naturally the Close Encounters divided themselves into three groups. There were those that were close, but didn't do anything; those that were close and did do something; and those that were close and had creatures in them or around them. So I now had Close Encounters of the First, Second and Third Kinds. I

didn't think the classification would take off and fly like it did; it was mostly for my own edification, a way of separating the cases I had.

**STACY:** How did the movei itself arise? Did Spielberg call you up and ask to use the name?

HYNEK: No, the other way around actually. I'd heard that Spielberg was making a movie called "Close Encounters of the Third Kind," so I called him up and we had a very nice talk. He apparently wanted to make some kind of financial arrangement with me and here I made a very bad mistake. Unfortunately, I said "Be my guest." Of course it's impossible to copyright a title alone, so he didn't pay a thing for its use. He was kind enough, however, to ask me to be technical consultant to the movie, so that worked out very well.

STACY: You received a fee for that work, then?

HYNEK: A very small fee, but I actually lost money on that. What happened was that my publisher withheld \$25,000 in royalties from the sale of my book, The UFO Experience: A Scientific Inquiry. The argument was that I had sold the movie rights to Hollywood. I pointed out that I might be a dumb professor, but I wasn't so dumb as to know you don't sell movie rights for a thousand dollars. Finally, the thing

was settled with me getting \$15,000 and paying \$9,000 legal fees out of that, so I didn't get very much. Some people think I made a lot of money out of the movie, but I didn't. I lost.

STACY: What was your opinion of the final product?

HYNEK: Spielberg, of course, had his own mind and knew what he wanted to do and I was only a technical consultant, remember. I gave advice about the radio telescope and how a military officer would say things one way as opposed to another, and those sorts of little details.

We sat down and went over the script together and chatted back and forth about it. At that time I didn't like the opening, the part about finding the lost flight of Navy Avengers in the desert and so on. But when the movie came out, it was a marvelous, dramatic opening, what with the wind and noise and all.

As I pointed out to myself and others, though, the movie didn't presume to be a documentary, it was Hollywood entertainment. Some people criticized me for having to do anything with it at all, saying that it would hurt my scientific image. At that time I was kind of caught up in the glamor of Hollywood myself, seeing how a picture was made, so I went along with it and I had a lot of fun. But that's about all.



**EDITOR DENNIS STACY** 

# UFONAUTS: HOMO SAPIENS OF THE FUTURE?

by MICHAEL D. SWORDS

#### **ABSTRACT**

Current evolutionary theory now sees the possibility of dramatic changes in structual appearance due to small changes in regulatory genes (those genes which control the rates of growth and development). This concept has reinstated the theory of "Man as Fetal Ape" as the leading hypothesis for explaining the change of form from apelike to human. By projecting a similar structural shift in our future, it is possible to construct a picture of a potential next stage in human evolution. This potential "descendent species" is strikingly reminiscent of the occupants in most of the well documented close encounter and abduction cases in ufology. If the "ufonauts" were to turn out to be future forms of Homo Sapiens, then many mysteries in the UFO phenomenon would disappear.

#### THE "NEW" HUMAN THEORY

Ape. Ape-man. Man-ape. Man. How did we really come to be? Oddly, the answer to this question may reflect upon not only ourselves but upon the UFO mystery as well.

Everyone is familiar with the standard conception of the evolution of our species from extinct ape-like ancestors. It seems as though every other month some palaeontologist discovers the chart of our heritage. But gaps and questions still remain. All across the fossil record, in fact, there seem to be "moments" of jumps in biological forms. It is as if evolution cruised along quietly for tens of thousands of years and then, BANG!, an abruptly changed structure arose. This realization has convinced many biologists that episodes of rapid structural change are commonplace in Earth's history, and the new theory is called "punctuated equilibrium." But what is the case?

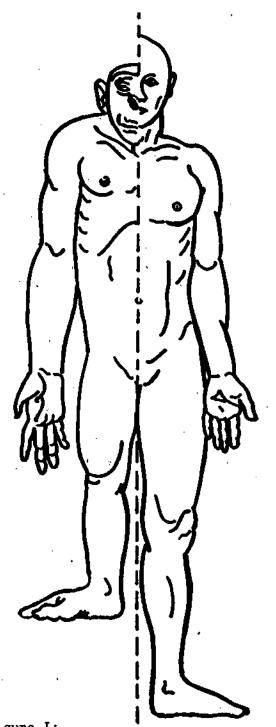


Figure I:
Although human and great ape genes are
99% identical, the structural forms
differ markedly. (Drawing in
imintation of that by S.L. Washburn,
U. Cal., Berkeley). (continued next page)

#### **UFONAUTS**, Continued

When we compare the human form to that of our nearest genetic "cousin" on Earth, the champanzee, we see many similarities of course. But there are significant differences as well. And yet when we compare ourselves genetically to the chimps we are nearly identical. As someone has recently phrased this: the genes fit, but the bodies do not (see figure one). How can this be? How can we have nearly identical structural genes, yet quite large structural differences in some areas of our bodies? The answer, it seems, is "neoteny." And this is one of the genetic tricks by which Nature can produce leaps of structural difference, "punctuated equilibrium."

In the 1920's anatomist Louis Bolk was struck by the similarities in structure not of humans and chimpanzees, but of humans and fetal chimpanzees. Almost all the easily recongized physical differences between ourselves and the apes are much much closer when comparing our forms with embryonic ape forms. Bolk's conclusion: Homo Sapiens is.

physically, a fetal ape, which has become sexually mature (see figure two).

This phenomenon of a "fetal" or "larval" form of species bypassing the normal physical development and becoming sexually mature turns out to be quite common in animals even today. Many species of amphibians are capable of it due to simple temperature changes in the lakes wherein they breed. Sometimes the changes are permanent, and a seemingly brand new physical form pops up on the ecological landscape from "nowhere." This "retention of fetal or ancestral characteristics in some organs" is Neoteny. It is a change not in gene structures, but in the mechanisms that govern the rates of their functions. Thus creatures with the same genes, but working at different rates, can appear remarkably dissimilar.

#### **FUTURE EVOLUTION?**

Since neoteny seems the major candidate for explaining the coming-tobe of humans from the past, what might be predicted for the coming-to-be of humans in the future? Will the Arrow of Evolution continue to alter our structure? Or will our technology negate its effects? Without being able to predict the future of our struggle to adjust to our own inventions, it is impossible to say whether "natural" selection will continue to operate on the human species. But we could look at our fetal forms and speculate as to the potential for structual change resident there, and whether some of those changes might be valuable.

As we have seen some of the major changes of past neotenous evolution from apes to humans have involved the brain and the features of the face. Comparing these features in adult humans and human fetuses, we note the following:

- 1) The brain of the fetus is again larger in proportion to the body than that of the adult:
- 2) The cranium to contain the brain is again more domed and prominent:
- 3) The eyes have remained large, but the nose, mouth, and ears are diminished:

Figure 2

Normal chimpanzee development

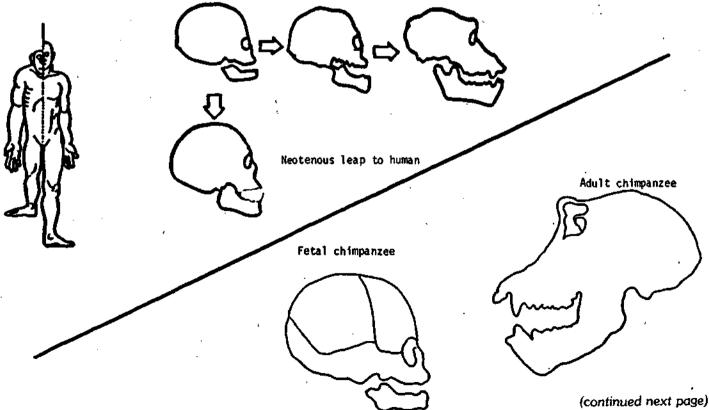
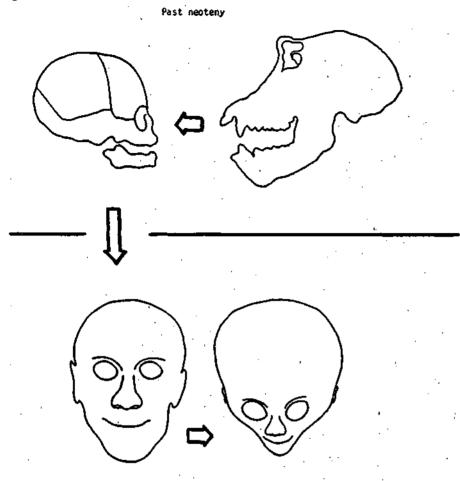


Figure 3



Future neoteny?

4) The jaw and chin bones are smaller, and the bones of the cranium less massive (see figure three).

Elsewhere in the body, we find that many of the changes of ape-to-man seem to have gone as far as they can or will go. For example, comparing adult humans and fetuses:

- 1) the thumb is readily opposable in both adult and fetal human; the big toe is not:
- the positioning of the skull on the vertebral column is such to allow straight-standing, eyes-front posture in both;
- the positioning of the pelvic girdle attachment is appropriate for straightstanding as well;
- 4) the proportions of limb lengths to trunk length seem to be relatively the same.

Other changes in structure and appearance lead us into the morass of the effects of the pituitary, since this gland is intimately involved with generegulation mechanisms (regulation of growth rates) via its hormones and the systems throughout the body, which they affect.

1. Concerning stature: since we are tall relative to most apes, we think of our evolutionary leap as bringing tallness with it. It didn't. In fact. alterations of growth toward a more fetal type might be expected to reduce height, at least initially. Why? Because we're envisioning a more rapid rate of sexual maturity vs. physical robustness, and the puberty hormones signal that the end to long bone growth is coming in humans. Our early ancestors, it is known, were short. They averaged 112.5 cm ( inches) in height. Our subsequent growth at least partially reflects pituitary gland malfunction of current humanity may be relevant here: congenital isolated growth hormone

deficiency, also known as "sexual ateliotic dwarves." These individuals have a block in the effectiveness (i.e. a rate-regulating problem) of pituitary growth hormone (somatotropin). It causes dwarfing (individuals of 2 ft. 11 inches to 3 ft. 11 inches high) with near normal body proportions and disproportionately large (though not "fetal")heads. They do mature sexually and can reproduce. This is quite near to a neotenous gene-regulatory phenomenon involving perhaps only one gene. It would seem to indicate that a neotenous jump of the type speculated upon above is well within the potential of the human gene pool. And it may focus upon the 3 to 4 foot stature level as the probable first approximation as to the expected height of the new form (see figure five).

- 2. Skin characteristics: if you ransack the medical literature looking at the effects of altering the pituitary function, you find many effects which are lethal. It seems obvious and justifiable to toss these in the garbage and not litter our discussion, since, if the changes we're imagining included "killer" problems, such "variations" would never survive. It would be an evolutionary loser and be eliminated immediately. Only combinations of traits which can survive need interest us. One common characterics which changes in pituitary-related diseases which probably no longer need be lethal or even hazardous in a technological world involves skin pigment. Both in hypophysectomy (removal of the pituitary) and Simmonds Disease (a pituitary dysfunction problem), as well as a related thyroid gland problem (Myxedema), the skin loses pigment. Very pale, almost albino-like skin is a common theme. Along with the paleness, the texture of the skin often changes as well. The skin becomes dry; sometimes puffy; sometimes waxy. The amount of superficial body hair diminishes and becomes finer. These effects are largely true in the fetus itself, of course.
- 3. Some miscellaneous characteristics: most of the other pituitary-related changes in these defects are obviously "out" as far as evolution is

<u>Apes</u>	Human Form	Human fetus - Future Human?
large cortex	increased (2 x)	ratio increased
large cranium	increased	ratio increased
partly domed	more domed	more domed yet
heavy jaw	lessened	lessened further
large lower face	lessened	lessemed further
large ears	lessened	lessened further
head forward	more upright	sl. more so
much body hair	1 essened	lessened further
long armed	shortened ,	approx. same
short legged	lengthened	shortened
thumb opposed	more so	same
big toe opposed	lessened	same
pelvis angled	more upright	same
massive bones	lessened	lessened further
long in womb	sl. increased	? <u>homo futuris</u> increased
	•	

TABLE I.

A comparison of Ape, Human, and Fetal features.

concerned (ex: senility, diabetes, hypoglycemia, adrenal cortex atrophy, emaciation and debility, etc). A few of the others might be tolerable, though.

A) Nitrogen-loss (less proteinstorage, therefore less masculature). A technological species would be less dependent upon their own brute force and therefore might easily find a lighter build more energy efficient; maybe they'd even live longer.

B) Lower metabolic rate (and lower body temperature). Along the same lines, to a point this could be an advantage: As has been said of our life span "the hot clock ticks faster," and the hotter fire consumes itself more quickly (see table I).

## UFONAUTS AND ARTIFICIAL BIRTH

If close encounter witnesses are describing the "typical" small "fetoid" ufonauts accurately, and assuming that they really exist, then there is a serious biological problem with their form. This problem evaporates, however, if we envision the use of a hi-tech reproduction technology: artificial

wombs.

A biologist looks at our fetalufonaut and thinks: how did that ever get born? The large domed cranium seems far too big for the birth canal indicated by the pelvic width. There are only three scenarios which would allow this:

1) birth could occur "earlier" in brain and cranial development than it would in humans, thereby making the birth diameter of the head very small.

2) sexual dimorphism in ufonauts could be very great with the females (of which we must have seen none in the encounter cases) having very large pelvises proportionately;

3) natural delivery could never take place in this hi-tech civilization, and the large domed craniums would be a result of their liberation of their genetic potential from the limits of their small birth canals.

Scenario "1" is unsatisfying since it would birth a very incomplete being, requiring a lengthy post-birth vulnerability period. Scenario "2" is possible, even though it would be out-of-line for advanced "Earth-type" forms. It also probably requires a strict separation of male and female tasks in that civilization. Scenario "3" is not only

a feasible explanation of the structure, but is a technological development which might be considered likely even in our own civilization.

Why? In present day humans, it is theorized, fetal development proceeds for 9 months or so with the fetal brain consuming 50% of the total oxygen being sent by the mother during much of the pregnancy. Upon reaching a certain size, the mother can no longer supply sufficient oxygen and the fetal brain begins to mildly asphixiate. As the fetus thrashes about (possibly sending chemical signals into the mother's blood) in protest of the insufficiency, the mother's system begins the birthing process. Over the millenia our species has matched this developmental phenomenon with the pelvic size of women and all turns out well.

But, theré is ample evidence that human brain development during this fetal period could go much further. Modern nutrition and prenatal care is pushing fetal development along more quickly. Fetal heads are becoming too large for the birth canals of smaller women. Caesarian births are more commong. As bio-science advances, this trend can only become more acute. There may easily be pressure to avoid the problems and the limitations on our brain's development by going to artificial wombs when they are developed. And once such cultural choices become commonly made, the doors to "artificial selection" and genetic engineering of the species are wide open.

#### **GENETIC ENGINEERING**

We tend to think that even though we are willing to stock breed all our familiar animals in the extreme that we will never do likewise with ourselves. We may be kidding ourselves. The technologies of artificial insemination, test tube babies, sex predetermination and cloning are already largely in place. The science of genetic engineering is pursued more hotly than any area of basic research. When college students are asked whether they would use a cheap, safe and effective sex-choice technology almost half say they would.

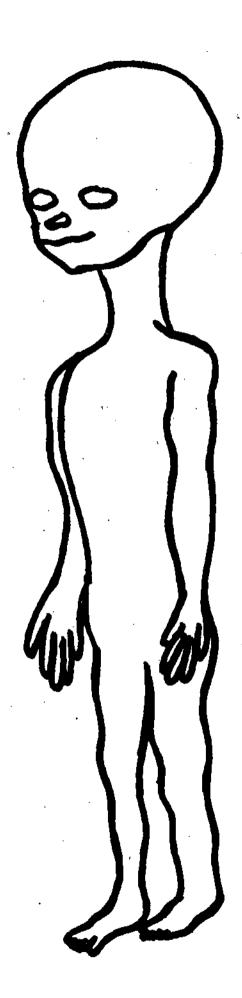


Figure 4

General proportions of the developed fetus

#### UFONAUTS, Continued

And almost 100% of all parents would like their children to be healthy, bright, and good-looking. Controlling the genetic potential for these charateristics is well within our current concepts of genetic choice and engineering, even though the reality is not here yet. This author considers it highly probably that we will use these powers extensively in the future, rightly or wrongly.

As centuries go forward and technical complexity increases in our world, the pressure for selecting greater intelligence in our offspring might be inescapable. The genetic switch to our next "neotenous jump" in evolution might be seen as the proper course to take. Alongside this pressure an analogous march toward "perfect health" may well be going on. Once most major killers have been eliminated the choice to genetically select those individuals who are resistant to the remaining few fatal defects may be imperative. Why have a child with a 120 year life expectancy, when you could have one of 300 years? Very precise genetic reproduction, perhaps cloning (the simplest precise mthod), would be attractive and "logical." The point is this: with increased technology it becomes easier to rationalize genetic choice in offspring and to accomplish it.

When drastic genetic change finally becomes a reality (ex: a neotenous artificial jump), the technology of the civilization would be so advanced as to allow certain qualities in the individual which would not be possible in a natural environment. For example:

- A) the head-to-pelvis ratio that we have mentioned:
- B) the diminuition of sex-organs, secondary sex characteristics, and a general "unisex" look; these characteristics are sometimes seen in pituitary gland abnormalities today by the way. The sexual organs would not even have to be functional, since forms of genetic selection such as cloning do not require active sex cells; why a species would want to go unisex, of course, is a bit difficult for us "unevolved humans" to imagine;
- C) In the fetus today the form of the larynx is incomplete, and if expressed in that form in an adult (through a neotenous shift) would probably eliminate normal speech and perhaps speech at all. A hi-tech civilization might make such a crucial loss irrelevant through technology, and of course, if telepathy exists, that ability would also make the loss of speech unimportant.

This picture paints a scene filled with reproductive and genetic

management. Such a species-wide program would be very likely to dramatically narrow the genetic diversity of the species, just as it does today in our agriculture. This is a dangerous game. If some factor in the environment changes, the entire species could be threatened. Or if some new need arose, the species may no longer contain the traits necessary to match it. If it was available, a convenient solution to these problems would be to go back to the genetic "roots," and harvest the cells of your pre-selection ancestors. A need to revitalize and expand the future "gene bank" would make meaning of some of the behaviors of the "abduction examinations." A need so great as to threaten the continuance of the species might make the risk of meddling in the past a reasonable choice to make.

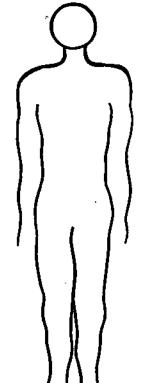
#### **SUMMARY**

What does the Neoteny Theory explain about the "ufonauts?"

- 1) Their facial features.
- Their general build proportions.
- 3) Their lack of hair and pigmentation.
- 4) Their sex-organ diminuition; and unisex look.
- 5) Their head-to-pelvis anomaly

(continued next page)

Figure 5



Comparison of normal human form and neotenous "fetal" human proportions ranged according to known common dwarfing genetic defects





#### UFONAUTS, Continued

(artificial birthing).

- 6) Their lack of normal speech.
- 7) Their abduction behaviors.
- 8) Their need not to interfere in obvious ways with their past.
- 9) Their need to create a sophisticated campaign of unreality (in order to ensure non-interference).
- 10) Their ability to breathe our (and their) atmosphere.
- 11) Their non-need to go great spatial distances (only to go temporal distances, which may involve no spatial involvement).
- 12) Their general interest in us (their ancestors).
- 13) Their possible association with "old-style" (non-neotenous) homo sapiens in the same craft.

In sum, the idea has within it potential answers for all the commonest objections to ufoanecdotal descriptions. But it brings up a pair of very large objections in their place, namely:

- 1) How in the world do you travel in time?, and is it even imagineable in a rational universe?
- 2) This theory is essentially post hoc, and those few things which it might predict are things which are likely never to be testable. This unfortunately condemns the theory scientifically, and consigns it ever to be a speculation... except for some lucky person with personal experience and internal knowledge of what may be going on.

So why bring this idea to the fore, if it is not likely to be testible? There is no requirement in life that all ideas be testible; only to be respectably scientific must this characteristic be present. Some ideas which fall beyond the abilities of the scientific method may nevertheless be true. It is just that. science and confidence should not be built upon them. And, who knows, perhaps as the UFO phenomenon goes on, some bits and pieces of concrete evidence may piece together to unexpectedly support one of the several leading theories, including this one. If so, we may be able to say to our local USAF base commander:

Sir, we have met the aliens, and they are us.

#### STARS & PLANETS

By Walter N. Webb MUFON Astronomy Consultant

#### **MARCH 1985**

#### Bright Planets (Evening Sky):

Venus begins the month high in the SW after sunset, still at its maximum magnitude of 4.3. But thereafter the brilliant planet moves rapidly toward the sun, setting earlier and earlier and finally disappearing into the solar glare by the end of the month.

The gap between Mars and Venus widens as the latter planet moves westward. Mars, much fainter than Venus, remains high in the SW, setting 3 hours after the sun in midmonth and a half hour after Venus. The red planet moves from Pisces into Aries.

Saturn, in Libra, rises in the SE around midnight on March 1 and by the end of the month, at 10 PM. The ringed planet appears to reverse direction on the 7th, turning westward for several months—an illusion caused by the earth catching up to the distant world and eventually passing it.

#### Bright Planets (Morning Sky);

Jupiter, in Capricornus, is still low in the SE before sunrise but slowly brightening. It rises at 4 AM in midmonth, 2 hours before the sun comes up.

Saturn moves low across the southern sky and stands in the SW at sunrise.

#### **Moon Phases:**

Full moon-March 6 Last quarter-March 13 New moon-March 21 First quarter-March 29

#### The Stars:

During the midevening hours the bright stars of the Winter Circle are sliding into the west. The brightest nocturnal star, Sirius, appears in the SW. The springtime constellations are at last ascending the eastern heavens. Leo the Lion, Bootes the Herdsman, and Virgo the Maiden, The orange star Arcturus (in Bootes) is another of those objects that often cause false UFO reports when they are low in the sky (refraction effects). In midmonth this zero-magnitude luminary, fourth brightest nighttime star, rises in the NE about 7:30 PM.

#### REFERENCES ON HUMAN EVOLUTION

- 1. Blechschmidt, Erich. The Beginning of Human Life. 1977
- 2. Campbell, B.G. Humankind Emerging. 1976
- 3. Capecchi, V. and M. Rigato. "Againty and Body Sturdiness of Primitive Man in Comparison with Contemporary Man," *J. Human Evolution II*: 441-5. 1982
- 4. Gribbin, John. "The 1% Advantage: human vs.
- gorilla," *Science Digest* August 1982, pp. 73-77. 5. Kolata, G.B. "Evolution of DNA: Changes in Gene Regulation *Science* 189:446-7. 1975
- Lavelle, C.L.B. R.P. Shellis, and D.F.G. Poole. Evolutionary Changes to the Primate Skull and Dendition. 1977
- 7. Miller, J.A. "Evolution: return of the embryo," Science News 120:12-14. 1981

## HUM'N' WHISTLE A UFO TUNE

by
JAMES McCAMPBELL

In one of his classic books, Dr. Jacques Vallee presented summaries of 923 UFO landings that occurred between 1868 and 1968. Small, humanlike creatures were observed in many of the events that were considered in the context of mythological entities such as fairies, elves, and gnomes. But the collection of summaries was a gold mine of other details covering the full scope of the UFO experience, including UFO size, shape, structural details, luminosity, aerial performance, artifacts, electrical interference, and sounds.

Witnesses reported hearing some sounds in 103 instances. Their descriptions varied so widely that they initially made very little sense. But all the quotations were tabulated along with other details on large sheets of butcher paper by the present author. By using colored pencils to tie together statements that could easily be alternative ways of describing a sound, it was found that nearly all statements fell into five categories. These were descriptively labeled as Violent, Low Pitch, Rush of Air, High Pitch, and Signals.2 Of present interest are the Low Pitch and High Pitch categories.

#### **WEIRD TUNES**

Typical words describing a low-pitch tone were "buzz," "electric motor," "generator," "humming," and "humming bees." Such sounds are now so familiar that they have become almost an auditory signature of UFOs at short range. In the Vallee summaries, however, the high-pitch tone was reported somewhat more frequently with such expressions as "high speed drill," "shrieking," "shrill whir," and "piercing whistle." The italicized words specifically denote high pitch.

Every effort should be made to understand what the witnesses have attempted to describe and to relate that to the physical world in which they, and



JAMES McCAMPBELL

-Dennis Stacu

we, live. The repeated references to humming bees is clearly a useful clue. The humming sound from flying bees is produced by the beating of their wings at about 270 times per second.<sup>3</sup> That sound can be approximated by humming in tune with middle C on a piano (261.3 cycles/sec) or C# (277.18 cycles/sec). On the other hand, references to electrical apparatus are reminiscent of much lower tones associated with alternating current at the standard 60 cycles/sec.

In 1973, the author suggested that the low-pitch sound from UFOs might be stimulated by pulsed, microwave radiation. Relatively little was known of the phenomenon at that time; however, medical experiments had shown that some people could hear modulated, radio-frequency energy that they interpreted as a "buzzing or knocking" sound. All the subjects felt that the

sound originated behind their heads regardless of the actual location.5 Apparently, the pulsed energy bypassed the outer ear and induced signals directly in the auditory nerve. The physical reality of that mechanism had been demonstrated when microelectrodues were inserted into a single nerve fiber with subsequent exposure to microwaves. Electrical potentials from millivolts up to 0.10 volts were measured between the inside and outside surface membranes.6 Radar systems are typically pulsed at a few hundred cycles per second whereas the frequency of the radiation itself is in the range of 500,000,000 c/s. Because the upper limit of human hearing is around 20,000 c/s, it is obvious that the test . subjects were hearing the pulses and not the carrier.

#### HUM'NWHISTLE, Continued

#### **HUMAN HEARING**

If a person sitting quietly in the woods hears a twig snap, he will instinctively turn his head and glance toward the source of the sound. This ability to pin-point the source is based upon a very small delay from the time that a sound wave reaches the nearer ear until it reaches the remoter ear, a process known as binaural audition. Without conscious effort, the brain in an instant miracle of computation accurately interprets the time difference in terms of the angle to the source. Clearly, the time of arrival would be the same from any source lying in a vertical plane through the bridge of the nose, that is, perpendicular to a line between the ears and intersecting it midway. The body has nó mechanism to determine where on that plane a source may be. If something in the field of vision is the obvious source, it will be so interpreted. But if no source can be seen, it will likely be interpreted as coming from the rear.

Some laboratory tests with actual sound sources on that plane, however, reveal some curious details. It was found that tones in the frequency range from 500 to 2,000 c/sec seemed to come from the rear whereas tones of lower or higher frequencies were interpreted as coming from the front.

As the speed of microwaves is vastly greater than the speed of sound, 186,000 mi/sec compared to 0.21 mi/sec, the time delay for microwaves reaching both ears is practically zero. It is, therefore, no surprise that sounds generaed by microwaves appear to come from behind the head. One would naturally suspect that the low pitch tone in UFO events may be caused by microwaves when the direction to the source is in doubt.

#### MICROWAVE AUDITION .

Extensive research on microwave hearing was conducted during the 1970s but the findings were broadly scattered in sources that are hard for the average citizen to obtain. It was necessary to purchase obscure documents, utilize a first-rate technical

library at a university or national laboratory, or rely upon inter-library loan services of the local library. But a thorough review of the subject is now available in a book, Microwave Auditory Effects and Applications.7 It's author, James C. Lin, Ph.D., is eminently qualified to write such a book as he is Associate Professor of Electrical Engineering, Adjunct Professor of Physical Medicine and Rehabilitation at Wavne State University. He was formerly Assistant Professor of Rehabilitation Medicine and Assistant Director, Bioelectromagnetics Research Laboratory at the University of Washington School of Medicine. In addition to an excellent historical survey and evaluation of the research, he presents his own, original analyses and compares the theoretical predictions with experimental data. This information is of vital interest in the context of UFO sounds although probably not anticipated by Dr. Lin.

While the ear is a complex structure, it will suffice to say here only that hearing occurs in the inner ear where a small, spiral organ, known as the cochlea functions as a microphone. It converts pressure waves transmitted from the air through the outer ear into electrical signals that travel along the auditory nerve to the brain. By means not exactly understood they move hairs lining the supporting cell structure to the organ of Corti to initiate the electrical signals. The wave form of impinging sound is faithfully reproduced as an electrical wave form in the auditory nerve.

The following paragraphs will rely heavily upon the book by Dr. Lin and parentheses in the text will indicate where the information may be found. Original research reports can be easily tracked down in the extensive and well-referenced bibliography in the book. Example, (Lin. p 100).

#### **PULSED MICROWAVES**

A number of parameters must be specified in order to describe a chain of microwave pulses completely. First, the frequency of the radiation must be known. Next, the manner in which the pulses are delivered is important, that is, the pulse rate. As a pulse rate can be

of any width that must also be stated. One can see that a strong but very short pulse followed by a relatively long interval before the next one would deliver only a small amount of power. Thus one speaks of pulse widths, peak powers, average powers, and duty cycles. It need not be difficult to understand the description of pulsed microwaves. One can easily conceive of microwave radiation at 1,000 MHz (million cycles per second) being pulsed at 100 Hz (cycles per second) having a peak power of 300 mW/cm<sup>2</sup> (milliwatts per square centimeter) but an average power of only 2 mW/cm<sup>2</sup>. One further concept to be encountered is that of "threshold," namely, the lowest power level at which any given effect takes place. For example, a person acclimated to cool weather may begin to feel decidedly uncomfortable when the temperature rises to 85°F, the threshold.

In a set of experiments with radiation applied to the back of human heads, three pulses 100 msec apart delivered every second were perceived as a distinct click. The threshold was well below 1 mW/cm² for pulse widths of 0.5 to 32 µsec and peak power densities up to 10Kw/cm² (Lin, p 47). Pulse trains were described as chirps with the pitch corresponding to the pulse rate. When the apparatus was keyed manually, the test subject could accurately interpret a digital code (Lin, p 49).

Further experiments produced much data on the relative loudness that was percieved as a function of the peak power densities. It increased sharply to a maximum at 200 mW/cm² then remained nearly constant up to about 650 mW/cm² with a constant average power density of 0.32 mW/cm². In terms of average power density, the maximum response lies in the range of 0.5 to 1.1 mW/cm² for constant peak power density of 370 mW/cm² (Lin, p 53).

The threshold for hearing 2453 MHz was found to be at an average power density of approximately 120  $\mu$ W/cm<sup>2</sup> (microwatts per square centimeter) for pulse widths from 1  $\mu$ sec to 32  $\mu$ sec with corresponding

#### **HUM'N'WHISTLE**, Continued

peak power densities from 40 to 1.25 W/cm² (Lin, p 54). As the energy density per pulse remained constant at about  $40\mu$ J/cm² (microjoule per square centimeter), the threshold occurred at that value independent of the peak power and pulse width that balanced out.

It has also been determined how the perceived loudness depends upon the pulse width. Measurements at 0.32 mW/cm² average power density showed it to be maximum from about 10 to 30 µsec, falling by a decade at 60 µsec and continuing downward rapidly (Lin, p 55).

'Microphones in the auditory nerve of cats, showed that the wave form produced by a pulse of microwaves was very similar to that produced by the click of a loudspeaker. The response terminated upon surgical isolation of the cochlea or sacrificial death of the test animal.

In summary, it is well established and documented that people are able to hear microwaves from 200 to 3,000 MHz with peak power densities of 100 to 300 mW/cm² and average power desnities as low as 0.4 mW/cm² with pulse rates from 1 to 1000 µsec. "....the microwave-induced sound appears as an audible click, buzz, or chirp depending on such factors as pulse width and pulse repetition frequency of the impinging radiation and is usually perceived as originating within and near the back of the head" (Lin, p 51).

#### ANIMAL STUDIES

Much research has been conducted on animals. In the early years, animals with avoidance training were used to establish detection thresholds. In later years, the experimental protocols became quite sophisticated. Anethesized animals were subjected to surgical procedures for access to organs in the head and attachment of micro-electrodes for measuring electrical responses of various organs. Studies were conducted on cats to measure responses of the primary auditory cortex, brain stem, medical geniculate, eighth cranial nerve, cochelear round

window, and cochelear microphonics.

For microwaves at 2450 MHz pulsed at 20 µsec, the threshold for cats was found to be at average power density of 33.0 µW/cm² (= 0.033 mW/cm²) and energy density per pulse of 33 µJ/cm² (micro Joules per square centimeter). This data permits a direct comparison with the thresholds for man as shown in table 1.

So the peak powers are comparable but the cat is about 3.6 times as sensitive to average power as man.

In other experiments, similar data were obtained for cats and one dog at 3,000 MHz and 15-µsec pulses as pictured in table 2.

involving animal disturbances can be found in a wonderful book published by the Central European Section of The Mutual UFO Network. It is the Proceedings of their 9th Annual Conference in the format of a 471-page, quality paperback.8 Of 552 cases concerning the strange behavior of every sort of mammal, insect, and fowl, 320 cases involved dogs but only 15 cases involved cats. It is well known that dogs are easily disturbed by UFOs but it is somewhat of a revelation that cats are also. Could the predominance of canine reaction be related to a preference for dogs as pets? Probably not. No one really knows the

		Peak Power (W/cm²)	Average Power _(#W/cm²)	Energy De per Pul (#J/cm	se
Man		2.15	120	40	(Lin, Table III, p 54)
	(Ratio)	(1.3)	(3.6)		(1.2)
Cats		1.7	- 33	33	(Lin, Table V, p 89)
			Table 1.	4	
Cat	•	0.58		8.7	(Lin, Table VI, p 81)
	. (Ratio	o) (2.9)			(2.9)
Dog (1	l) 🖖 🗀	0.20		3.0	(Lin, Table VI, p 81)

Table 2.

Thus, sufficient data is available to make a direct comparison between man, cats, and dogs, assuming that the single dog was representative of its genus. Based upon the peak power densities and energy densities per pulse, cats are comparable to man in the ability to hear microwaves with cats having 20 to 30% advantage. Dog, however, are nearly three times more sensitive than either cats or man. If UFOs emit microwave readiation of approximately the above parameters, one may be sure that dogs would detect their approach before their owners, a pattern that is well established.

#### **BEHAVIOR**

The strange behavior of dogs under the influence of UFOs is a prominent feature in a host of sightings but the reaction of cats is less well known. A recent catalog of cases population of dogs and cats in the United States but surveys by pet food manufacturers have produced estimates of roughly an equal number of each, somewhere near 30 million. The differences in their responses could be attributed to their basic natures or different sensitivity to pulsed microwaves. So much for perception of pulsed microwaves as a possible explanation for the Low Pitch category of sounds associated with UFOs.

Many additional mechanisms for hearing microwaves have been proposed but most of them have been discarded by the scientific community upon discovering that their sensitivity is one or more orders of magnitude too small. The sole remaining candidate is known as the thermoplastic process. In that process absorption of a pulse of energy in biological tissue produces an extremely small increase in

#### HUM'N'WHISTLE, Continued

temperature. Due to thermal expansion, a corresponding increase in pressure takes place that then propogates through the medium as a sound wave. A microwave pulse impinging upon the head threfore gives rise to a weak sound wave that propogates and reverberates in the cranium. Such vibrations would then be carried by bone conduction to the cochela where, through conversion to electrical signals, they would seem audible. (Bone conduction of sound in the body is put to good use in certain types of hearing aids. An easy way to experience it is to have a friend stroke low notes on a piano with the sustaining pedal suppressed, place fingers in your ears, and rest your chin on the piano frame. It can also be fun at a local piano bar.

The thermoplastic process has been analysed by Dr. Lin in exquisite mathematic detail.10 The head was theoretically represented as a sphere of brain tissue. The analysis is extremely elaborate and the computational requirements enormous. In short, it was found that the fundamental frequency reverberation that would be generated in the cranium was completely independent of the microwave parameters and dependent only upon the size (radius) of the head and the acoustical properties of brain tissue. The generated frequencies are quite high and they are inversely related to head size.

Subsequent refinement of the analysis introduced a rigid boundary to the head and extensive computer calculations indicated that the frequencies increased roughly 70% (Lin, p 157). It is expected that actual frequencies measured in the laboratory would fall between the results of the basic and improved models.

Calculated thresholds for perceiving sound through this microwave induced thermoplastic process are quite high. For input date of 2,450 MHz, 10 µsec pulses, and 1,000 mW/cm³ absorbed energy, the refined model yields a threshold of 589 mW/cm² of incident power for cats with head radius of 3 cm. (Lin, Fig. 79, p 163). The experimental result for the same

parameters was a threshold of 1,300 mW/cm<sup>2</sup> producing twice the sound pressure in the head. For man with head radius of 7 cm, the threshold was calculated to be 2,183 mW/cm<sup>2</sup> for 918 MHz, 10 #sec pulses, and 1,000 mW/cm3 of absorbed energy. These thresholds of 589 mW/cm<sup>2</sup> for cats and 2,183 mW/cm<sup>2</sup> for man are extremely high in comparison with thresholds for hearing microwave pulses that are much less than 1 mW/cm2. It is also emphasized that the thresholds far exceed the safety limits governing microwave exposures to people in the U.S. which are

a) 10 mW/cm² for 0.1 hr or longer, 10 to 100 MHz and

b) 1 mWHr/cm<sup>2</sup> for any 0.1 hr, 1000 MHz. (Lin, p 161.)
Anyone hearing a shrill whistle from a nearby UFO should run away as fast as possible to avoid serious injury.

Under intense irradiation, pulse rates in the auditory nerves of living but anesthetized guinea pigs and cats were measured with microelectrodes. Agreement between the theoretical predictions and experimental measurements is remarkable as shown below.

Mammal	Typical Head Radii (cm)	Theoretical Frequency Range (kHz)	Experimental Values (kHz)
Guinea Pigs	1.5 - 2.5	40 - 70	. 50
Cats	2.5 - 3.5	30 - 40	38
Man	7.0 - 10.0	10 - 5	Not measured

Table 3.

appropos.

For both guinea pigs and cats, the experimental results fall within the range predicted by the two theoretical models of the head (Lin, p 161). The frequencies produced by the thermoplastic process are very high. The measured value for cats at 38 kHz, well within their hearing limit of 60 kHz, is beyond the human hearing limit of 20 kHz. It is not possible to say what it might sound like to cats but, on the musical scale, doubling the frequency increases the pitch by an octave. So one could guess the cat to hear something like a tone about one octave above the limit of human hearing. For medium-sized dogs with larger heads, the tone would be lower but for head radii of less than 4 cm it would still be

ultrasonic as far as humans are concerned.

#### **UFO MUSIC**

No measurements of this effect have been made on humans nor is it ever likely because of the dangerously high incident energies. However, success of the theory for small mammals lends great confidence in interpreting the results for man. Theoretical values of 10 to 15 kHz for man represent very high-pitch tones. The highest notes produced by the piano, xylophone, glockenspiel, and piccolo do not exceed 4.19 kHz, the C four octaves for middle C.11 The predicted frequencies would lie in the 6th octave above middle C or in the second octave above the piano keyboard. The musical triangle is perceived as having a very high pitch but it theoretically has no fundamental tone.12 (A thrilling use of that instrument can be heard on a good hi-fi in Piano Concerto No. 1 in E Flat Major at Franz Liszt.) Old-fashioned radios used to produce a squeal between stations of 10 kHz because the broadcast frequencies of neighboring

stations were separated by 5 kHz. It was known colloquially as the 10-kilocycle whistle. This discussion should impart some idea of what the microwave, thermoplastic vibrations would sound like. The language used by UFO witnesses to describe their experiences of the High Pitch would appear to be

A rather remarkable set of facts seems to couple the known effects of microwave radiation to the auditory experiences of UFO witnesses and possibly their pets. At very low and measured thresholds, individual pulses of radiation could be heard as substitutes for sonic pressure waves

#### HUM'N'WHISTLE, Continued

with the transduction taking palce in the cochlea. At much higher intensities, microwave pulses could initiate the thermoplastic production of highfrequency sound waves in brain tissue that depend upon head size and propogate to the cochlea via boneconduction. It appears to be significant that pulsed microwaves can account for two major categories of sounds experienced in the presence of UFOs, especially since two distinctly different mechanisms are involved that have only been discovered recently. In other words, the technical details suggest that UFOs emit pulsed microwaves. So hum and whistle a UFO tune!

#### REFERENCES

- 1. Vallee, Jacques, Passport to Magonia, Appendix, p 164 ff, Regnery, 1969.
- 2. McCampbell, James M., UFOlogy, Chapter 4, Celestial Arts, 1976.
- 3. Shaw, Frank R., and Whitehead, Stanley B., Honey Bees and Their Management, Van Nostrand, 1951.
- 4. McCampbell, Ibid, p 49.

- 5. Digest of the 1961 International Conference on Medical Electronics, New York, IRE.
- Copson, David A., "Microwave Heating, In Freeze-Drying, Electronic Ovens, and Other Applications," Chapter 19, Radiation Biology of Microwaves, The AVI Publishing Company, 1962.
- 7. Lin, James, C., Microwave Auditory Effects and Applications, Charles C. Thomas, 1978.
- 8. Schneider, Adolph, Animal Case Catalog, March 25, 1983, Herausgegeben von Dipl Phys. I. Brand, Seltsame Flugobjekts Und Die Einheit Der Physik, p 437, MUFON-CES-Bericht Nr. 9, 1983
- 9. Encyclopedia of Science & Technology, McGraw-Hill, Vol 9, p 234 and Vol 5, p 801, 1977.
  10. Lin, Chapter 6. The original paper was Lin, J.C., "Microwave induced Hearing: Some Preliminary Theoretical Observations," J. Microwave Power, 11:295-298, 1976.
- 11. McGraw-Hill, Ibid, p 772.
- 12. Encyclopaedia Britannica, Micropaedia, Ready Reference and Index, Vol. X, p 114.
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## **MUFON**

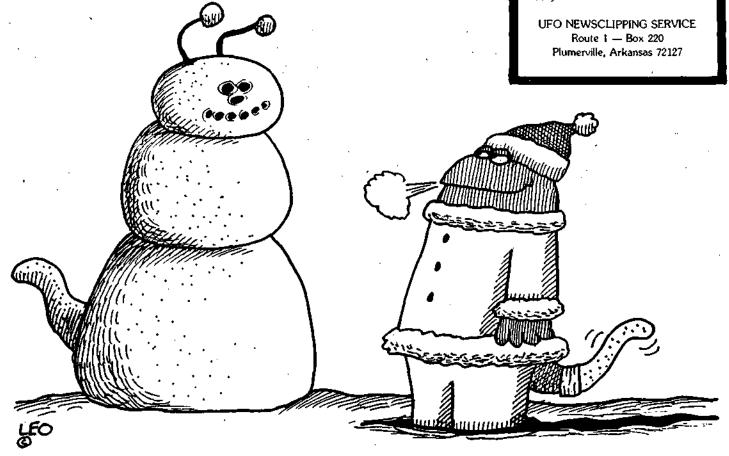
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"Our UFO Newsclipping Service issues are 20 page monthly reports, reproduced by photo-offset, containing the latest United States and Canadian UFO newsclippings, with our foreign section carrying the latest British, Australian, New Zealand and other foreign press reports. Also included is a 3-5 page section of "Fortean" clippings (i.e. Bigfoot and other "monster" reports). Let us keep you informed of the latest happenings in the UFO and Fortean fields."

For subscription information and sample pages from our service, write today to:



#### **DIRECTOR'S MESSAGE, Cont.**

Francisco, California, aired a full hour UFO program from 7 to 8 p.m. on November 24, 1984, through the cooperation of **Paul Cerny, Tom Gates** and other members in the San Francisco Bay Area group.

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The TELUFONET was utilized to advise all State Directors on the showing dates and times of CNN's UFO documentary, with the initial call by Marge Christensen to Thomas P. Deuley and Douglas Labat at 10:40 a.m. C.S.T. on Saturday, January 19th. A revised TELUFONET list was mailed on 1/21/85 to State Directors affected. If any State Director has misplaced their TELUFONET list or needs the revision, please contact Walt Andrus. The MUFON P.I.P.E. Line newsletter is mailed only to the people on the national committee, not to all State Public Relations Directors as stated in my Director's Message in the January 1985 issue of the Journal.

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With the airing of "UFOs: The Bentwaters Incident," the demand for the new book SKY CRASH: A Cosmic Conspiracy by Brenda Butler, Jenny Randles and Dot Street, has exceeded existing supplies. There are at least two sources in the U.S.A. which would be more convenient than ordering from the publisher in England to obtain your personal copy. Arcturus Book Service. 263 North Ballston Ave., Scotia, NY 12302 U.S.A., has listed SKY CRASH for \$13.95 plus 85¢ for fourth class postage in their January 1985 catalog. **Bob Girard** has advised that this first order was sold out immediately and the waiting list will be filled with his second shipment. He will gladly accept your order, but it will be treated as a reservation for future shipments (telephone 518-372-2373). At the time of this writing, William L. Moore Publications, 4219 West Olive St., Suite 247, Burbank, CA 91505 (telephone 818-506-8365), still had a small supply at \$14.00 postpaid.

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The newsletter JUST CAUSE published by Lawrence Fawcett, and edited by Barry Greenwood, has resumed publication with thier second

issue, dated December 1984. Consisting of four pages, a subscription may be obtained from P.O. Box 218, Coventry, CT, 06238, for the price of 4 issues - \$10 (\$15 foreign).

Kenneth W. Behrendt, 274
Second St., Elizabeth, NJ 07206, who
has fomerly published articles in The
Sixth Quark Journal, The SBI Report
and the Cambridge UFO Research
Group Newsletter, has now become
the editor and publisher of his own
twelve-page UFO semi-technical
magazine titled Annals of Ufological
Research Advances (AURA) with
volumen 1, no. 1 dated January 1985.
He does not advise the subscription
price or frequency of issue, therefore
we refer interested readers to the above
address.

\* \* \* Dr. Virgilio Sanchez-Ocejo, MUFON Special Representative to South America and President of the Miami U.F.O. Center, P.O. Box 313, Opa Locka, FL, 33054, has set up a window display in a book store in the heart of "Little Havana" in Miami, Florida. The sign on the window in Spanish reads INFORMESE CUANTO ANTES or translated: "get information as soon as possible." Every Saturday their members are present to provide information about the UFO phenomenon and various organizations, publications and books for the public.



Barry Greenwood

#### In Others' Words

UFO reports from China, as detailed by author Paul Dong, are featured in the November 6 NATIONAL ENQUIRER issue. Dong's book, THE FOUR MAJOR MYSTERIES OF MAINLAND CHINA, contains a section on UFOs which describes numerous UFO sightings from all parts of that country. In Brazil, the small town of Demerval Lobao has been "terrorized" by eggshaped UFOs during 1984, according to an article in the ENQUIRER's November 13 issue. UFO sightings near Tyrone, Pennsylvania are the subject of a report in the December 11 issue.

Doug Curran doesn't particularly believe in "flying saucers," but his travels all over North America in the past six years have been in search of people who do believe. Curran, a Canadian photographer, will publish his observations and photographs in a book titled IN ADVANCE OF THE LANDING: FOLK CONCEPTS OF OUTER SPACE. A summary of his research appears in the "Anti-Matter/UFO Update" section in the December issue of OMNI.

Bruce Maccabee's continuing series of articles for FATE focuses on cases from 1949 (New Mexico) and 1950 (Alaska), in the January issue of that magazine. The February issue contains an article by Maccabee on missing Air Force films of UFOs which were taken during 1950 sightings in New Mexico.

Although it does not pertain directly to UFO research, JOURNAL contributor Ann Druffel has coauthored a book with Armand Marcotte, THE PSYCHIC AND THE DETECTIVE, dealing with Marcotte's psychic investigations of crimes. For those who may wish to obtain a copy, the book is available at \$7.95 (softcover) from ACS Publications - P.O. Box 16430 - San Diego, CA 92116.

A new line of paperbacks, featuring material from the NATION-AL ENQUIRER, will be published as a joint venture with Pocket Books. One of the first titles in the series will be UFO REPORT, available in May.

Lucius Farish

## **DIRECTOR'S MESSAGE**

#### by Walt Andrus

The UFO Study Group of Greater St. Louis, host for the MUFON 1985 UFO Symposium at the Chase Hotel in-St. Louis on June 28, 29, and 30, 1985, has announced the following specific plans for this year's event: 1) The featured speakers are George Fawcett, Stanton Friedman, Peter Gersten, Budd Hopkins, William Moore, Ted Phillips, John Schuessler, Leonard Stringfield and David Webb; 2) Advanced reservations for all four sessions is \$25.00 prior to June 21. 1985; 3) Checks should be made payable to "UFO Study Group of Greater St. Louis" and mailed to Mrs. Helen C. Henke, 4024 90th Ave., Florissant, MO 63034; 4) The price at the door for all sessions will be \$28.00; 5) The price for each of the four sessions is \$7.50; 6) An added feature of this year's symposium will be a "Breakfast With the Speakers" on Sunday morning.

This will be an opportunity for everyone to talk with the speakers and be served a full course, deliciousbreakfast by the Chase Hotel. The price of the breakfast will be \$10.00 and reservations are open until June 24, 1985. Hotel reservations can be made by contacting the Reservation Manager, Chase Hotel, 212 North Kingshighway, St. Louis, MO 63108. The phone number is (314) 361-2500. Fifty rooms are being held for attendees, but reservations should be made no later than thirty (30) days prior to the Symposium to insure accommodations. Room rates are \$60.00 per day for a single or double, \$70.00 for three persons and \$80.00 for four persons. There is no charge for children under 18 years of age.

With the recent introduction of new ultra-saver rates by the major airlines to match the rates of other carriers, substantial savings may be obtained by making your reservations to St. Louis now in order to meet the



specific conditions applicable to these new rates.

Donald M. Ware, State Director for Florida, has selected Everett R. Walter, Ph.D., as his Assistant State Director. Dr. Walter is also a Consultant in Electrical Engineering for MUFON. His prime responsibility will be to seek competent people in southern Florida. Two promotions were recently announced by Bruce A. Widaman, State Director for Missouri. Walter A. Palmer is the Assistant State Section Director for St. Louis County, and Joseph L. Palermo has accepted the responsibility as Director of Public Information for Missouri. Thomas M. Clark of Mt. View, California, has volunteered his expertise as a Research Specialist in Propulsion Systems.

It is a pleasure to welcome back Robert D. Boyd to his former position as State Section Director for Mobile and Baldwin Counties in Alabama, after having lived in England for over six years. Bob took advantage of this time to prepare a 345-page report titled "A Comparative Unit." The content of this work consists of over one hundred

cases initially reported as UFO sightings and/or experiences over Mobile and Baldwin counties, Alabama, U.S.A. These sightings occurred from 1947 through 1977, within a geographical area of approximately 4,000 square miles. This area, including bodies of water, is located between coordinates 30.10 to 31.15 Latitude north and 87.25 degrees Longitude, west.

Typical examples of recent UFO electronic media public education programs across the country consist of the following outstanding events:

1) Cable News Network (CNN) produced the special assignment documentary "UFOs the Bentwaters Incident" by Chuck DeCaro, in cooperation with Larry W. Fawcett (showing dates January 22 through 25).

2) WLS—TV Channel 7, Chicago, produced a live one-hour segment on UFOs on January 18, 1985 (9 to 10 a.m.), on the very popular program "AM Chicago," hosted by Miss Oprah Winfrey. Walt Andrus and two of the abductees from Budd Hopkins' paper "The Haunting of Kitley Woods" from Indianapolis, Indiana, appeared (on January 29th, Oprah Winfrey appeared on the Johnny Carson Show with Joan Rivers as host, based upon her own popularity as a TV talk show personality).

Ray Boeche and Scott Colburn are the hosts for a weekly program on KZUM/FM in Lincoln, Nebraska, each Saturday morning from 11 a.m. to noon, titled "Unexplained Phenomena."

- 4) KVUE TV Channel 24 in Austin, Texas, ran a segment featuring Walt Andrus and the work of the Mutual UFO Network on January 29, 1985, on the program "Good Morning Austin."
  - 5) KGO-TV Channel 7 San

(continued on page 19)