

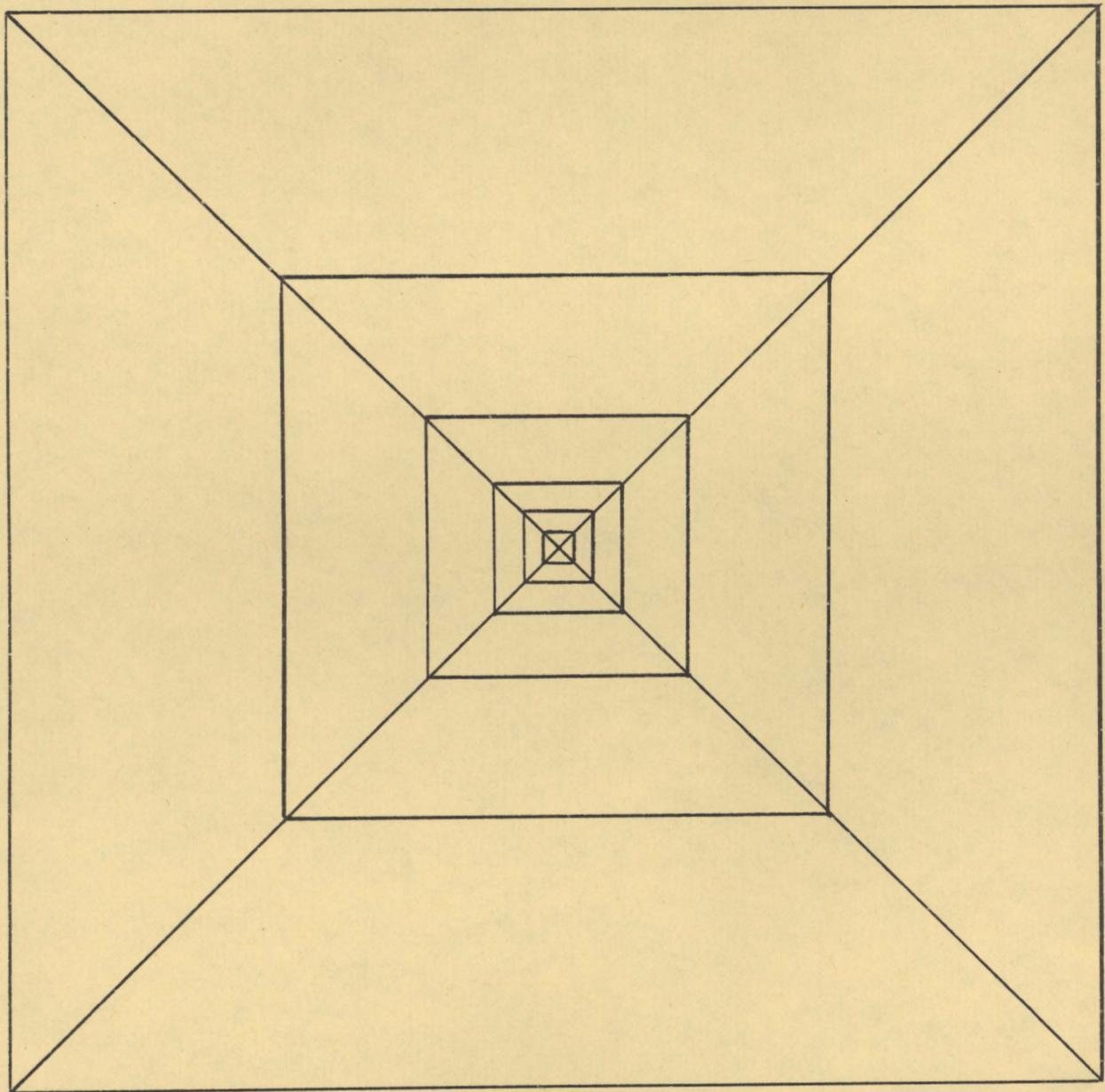
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Editorial

by H. Griesberg & K. Basterfield.

Ted Phillips of the USA has collected at least 1477 physical trace events which appear at first glance to relate to the UFO phenomena. Dave Webb and Ted Bloecher also of the USA have collected around about 1500 (plus) global entity reports. Richard Haines again of the USA has reportedly amassed something like 3,000 cases involving observations by aircraft crew.

On a more modest level, Bill Chalker of Sydney has compiled a listing of 227 Australian physical trace events, whilst Keith Basterfield and others have gathered 105 Australian and New Zealand entity reports. One might be overjoyed at the sheer numerical volume of these UFO observations. Alas! It is not quite so simple.

Ted Phillips himself has said: "After a long and critical look at the 1447 ground trace reports on file, I have found that the vast majority lack information to such an extent as to preclude rating the case objectively. Of the total cases, 68 appear to offer a high level of strangeness."

Bill Chalker in talking at UFOCON 4 of physical trace cases in Australia wrote: "One would expect to be able to take the exant evidence and give a clear unambiguous picture of the nature of the phenomenon. Unfortunately this has not been the case."

The overall physical trace collections include many caused by fungi, slime mould, leaf smut, lightning, vehicles, and hoaxes. Perhaps as little as 5-10% remain of real mystery.

Keith Basterfield in examining the 105 entity events reduced to 21 the number which appeared to be worthy of further study based on the available evidence. The purpose of drawing your attention to this matter is that if we wish to provide "watertight" cases for scientific study WE must be the ones to eliminate all the events conventionally caused and WE must be satisfied that we have eliminated all possible causes before we press the attention of science to the residue. To date we don't believe that UFO researchers in general have been critical enough in their review of events. Vast catalogues of events which appear to relate to UFOs are not enough. They are very necessary in the first

instance to enable the population size and type of events to be gauged, but by themselves they are not the end result we need to go for.

It is our suggestion that those who have vast catalogues of material should, wherever possible publish all available details for others to assist in the reduction to a level where the residue really presents an enigma. Only then can we expect the conventional scientist to come to the party and help with research.

UFOCON 5 - 1980.

by Harry Griesberg.

UFOCON 5 was the 5th annual conference which was organised by ACUFOS and was held at the Belconnen Way Motel in Hawker A.C.T. between Saturday 29th November and Monday 1 December. A total of 18 participants, including representatives from member organisations of ACUFOS, individuals and ACUFOS scientific consultants underwent three days of presentation of papers and discussions on a variety of topics related to the UFO phenomena. In my opening speech, I mentioned that a lot of changes for the better had taken place over the last twelve months within Australia, with more to come in the future. I further added that I hoped the three day conference would be as stimulating as the previous four and that the Australian UFO research organisations & individuals would leave richer in knowledge and with more goals to aim for. I feel that no-one at the conference departed with any less. A number of projects were initiated, methods discussed and future aims decided upon. Personally, I feel that by next year's conference, to be held in October in Adelaide, South Australia, we will be further ahead than ever before, if everyone carries out what they have promised.

The Papers presented were titled as follows:

1. UFO Photographers are very peculiar people - Frank Gillespie.
2. Retrospective Investigation - David Reneke.
3. Australian SETI 1980 - Jane Brooks & John Prytz.
4. Rating Australian UFO Reports in order of merit - Michael Hough.
5. The UFO Physical Trace Experience in Australia - Bill Chalker.
6. Imagery, can we explain certain close encounters with the UFO phenomena?
- Keith Basterfield.
7. Psychological reactions to UFO events - Mark Moravec.
8. The mystery of a machine to go through the air - Bill Chalker.
9. UFOs and Anthropoids - Mark Moravec.
10. It's later than you think - Dr. Ralph Molnar.
11. Geomorphological features potentially mistaken for UFO landing traces -
Michael Hough.
12. A Study of Leonard Cramp's theory of UFO propulsion - Martin Gottschall.
13. UFOs: A Unified Extraterrestrial theory - John Prytz.
14. An indepth review of Australasian UFO related entity reports - Keith Basterfield.
15. Flying Saucers - Colin Phillips.

All in all, the conference was another tremendous success, and we're all looking forward to next year's conference.

NOTE: If anyone is interested in a selection of the papers presented at UFOCON 5, please forward \$5 (overseas customers note - AUSTRALIAN CURRENCY) to ACUFOS P.O. Box 546 Gosford NSW Australia 2250. We have available several copies of selected papers until stocks run out.

The 1978 Missing Cessna Event - A Review Report

by Keith Basterfield.

In the ACUFOS Journal Vol 1 No. 2 April 1980 we announced that we would undertake a review of the incident of 21 October 1978 in which an aircraft piloted by Frederick Valentich disappeared whilst on a flight to King Island in Bass Strait.

A re-examination of all the available material has been undertaken since that announcement. We will not repeat the basic details of the story as it has been described on numerous occasions.

We are left with an incident which consists of a reported conversation between a pilot and an air traffic controller relative to an unusual phenomena which the pilot claimed to be observing near him.

Numerous side issues emerged such as a psychic claim to have contacted the pilot, reported observations of UFOs on that day from surrounding localities, a photograph showing an anomalous object taken closely after the plane disappeared, etc. etc.

Removing these side issues as items which cannot be said to add to the validity of the aircraft event, the only item left is the radio conversation. An accurate transcript of the conversation is as follows:-

1906:14-DSJ: Melbourne this is Delta Sierra Juliet is there any known traffic below five thousand.

FS: Delta Sierra Juliet no known traffic.

DSJ: Delta Sierra Juliet I am, seems (to) be a large aircraft, below five thousand.

1906:44-FS: Delta Sierra Juliet what type of aircraft is it?

DSJ: Delta Sierra Juliet I cannot affirm it is four bright, it seems to me like landing lights.

1907: FS: Delta Sierra Juliet.

1907:31 - DSJ: Melbourne this (is) Delta Sierra Juliet the aircraft has just passed over me at least a thousand feet. above

FS: Delta Sierra Juliet roger and it is a large aircraft confirmed?

DSJ: Er unknown, due to the speed its travelling is there any airforce aircraft in the vicinity?

FS: Delta Sierra Juliet no known aircraft in the vicinity.

1908:18-DSJ: Melbourne it's approaching now from due east towards me.

FS: Delta Sierra Juliet.

1908:41 - (Open microphone for two seconds).

1908:48 - DSJ: Delta Sierra Juliet It seems to me that he's flying over me two three times at a time at speeds I could not identify.

1909 - FS: Delta Sierra Juliet Roger what is your actual level?

DSJ-My level is four and a half thousand four five zero zero.

FS: Delta Sierra Juliet and you confirm you cannot identify the aircraft.

DSJ: Affirmative.

FS: Delta Sierra Juliet roger standby.

1909:27 - DSJ: Melbourne Delta Sierra Juliet It's not an aircraft it is (open microphone for two seconds)

1909:42 - FS: Delta Sierra Juliet Melbourne can you describe the er aircraft?

DSJ: Delta Sierra Juliet as it's flying past its a long shape (open microphone for three seconds) cannot identify more than that it has such speed (open microphone for three seconds) before me right now Melbourne.

1910 - FS: Delta Sierra Juliet roger and how large would the er object be?

1910:19-DSJ: Delta Sierra Juliet Melbourne it seems like its stationary what I'm doing right now is orbiting and the thing is just orbiting on top of me also, its got a green light and sort of metallic (like) it's all shiny (on) the outside.

FS: Delta Sierra Juliet.

1910:46-DSJ: Delta Sierra Juliet (open microphone for five seconds) it's just vanished.

FS: Delta Sierra Juliet.

1911 - DSJ: Melbourne would you know what kind of aircraft I've got is it (a type) military aircraft?

FS: Delta Sierra Juliet confirm the er aircraft just vanished?

DSJ: Say again

FS: Delta Sierra Juliet is the aircraft still with you?

DSJ: Delta Sierra Juliet (its ah nor (open microphone for two seconds)) now approaching from the southwest.

FS: Delta Sierra Juliet.

1911:50-DSJ: Delta Sierra Juliet the engine is rough idling I've got it set at twenty three twenty four and the thing is (coughing).

FS: Delta Sierra Juliet roger what are your intentions?

DSJ: My intentions are eh to go to King Island ah Melbourne that strange aircraft is hovering on top of me again it (open microphone for two seconds) is hovering and its not an aircraft.

FS: Delta Sierra Juliet.

1912:38-DSJ: Delta Sierra Juliet Melbourne (open microphone for seventeen seconds).

As much speculation was rife concerning various aspects of the account, a number of questions were raised with the Australian Department of Transport, the relevant government authority in charge of civil aviation.

1. Was the aircraft identified on any radar at any stage during which the pilot advised the presence of an unidentified phenomena? Was any "unknown" sighted on radar at any stage during the incident?

"Because the aircraft was operating outside controlled airspace no radar watch was maintained nor, indeed, was required. No "unknown" was sighted on Melbourne radar at any time."

2. Was there a check made of possible alternative airstrips/airports made, as suggested by the media? If so, was there any indication of the plane's whereabouts identified by this means?

"In accordance with established search and rescue procedures, a check was made of all known landing areas in the vicinity with no result."

3. It was reported that the aircraft was fitted with a radio survival beacon. Was it in fact so equipped? If so, what is the Departmental attitude to the fact that this was apparently never heard?

"It is believed the aircraft was not carrying a VHF survival beacon (VSB)".

4. It has been suggested that other aircraft pilots heard the radio transmissions and one "theory" has it that the pilot was advised to switch frequencies for a "message" from the Department of Defence. What is the Department's attitude to this "theory".

"Melbourne flight service was monitoring other traffic on the same frequency and it is possible that other pilots heard the transmissions. However, the suggestion that Valentich was advised to switch frequencies 'for a message from the Department of Defence' is not, repeat not, correct."

5. Wide coverage was given to the reported fact that the pilot had not requested the lights at Currie to be switched on for his arrival. Is this in fact the case? Would this request be a normal requirement when filing a flight plan for Currie? i.e. would the fact of non-request have been necessarily checked before the flight plan would be approved?

"It is normal procedure for a pilot contemplating a landing at King Island after dark to have the airfield lights switched on. In this case, Valentich did not request the lights. This is a pilot responsibility."

In summary, the event as reconstructed by the Department of Transport is that of a one sided verbal report with no radar confirmation or denial from a pilot who had logged a nocturnal flight plan to an island where he had not requested landing lights. Following this review our conclusion is that the reported observation does not have any connection with the phenomena under study by the Australian Centre for UFO Studies and deserves no further attention by serious UFO researchers.

Opinion Polls and UFOs (1947-1977)by John Prytz.

Ever since UFOs (then "Flying Saucers") hit world headlines in mid-1947, opinion has been divided as to what exactly this sort of phenomena was, and what it represented. Often that opinion has been expressed individually in private and/or print (newspapers, journals and books) and/or electronic media (television and radio). Now and again however, there has been a collective statistical publishing of opinions on UFOs. It is the history of the latter that I wish to deal with in this article.

Whatever UFOs are, they of course will in no way change the nature of their reality because of opinion polls. However, those opinion polls over the years, are interesting in themselves, and comprise a unique sub-division in the history of the UFO phenomena. It is the purpose of this article to briefly survey 9 such polls from the year 1947 through 1977. No doubt many more exist, and the author would be grateful to receive knowledge of these either c/o ACUFOS or directly at P.O. Box 1703, Canberra City A.C.T. 2601.

Given that the UFO first reached national and world-wide fame in mid-1947, it is not at all surprising to learn that the first American Gallup poll was conducted within weeks of the Kenneth Arnold et.al sightings. According to historian Dr. David Jacobs:

"Almost everyone assumed the objects were real but easily explained - that witnesses had simply misidentified conventional phenomena. An August 1947 Gallup Poll projected that 90 percent of the adult population had heard of flying saucers and that most people thought the objects were illusions, hoaxes, secret weapons, or other explainable phenomena. According to the poll, very few people thought the objects came from space." (Jacobs - p.41)

The UFO spaceships theory however didn't really get rolling for a couple of years, in fact until it became obvious the "Flying Saucers" weren't going to fly away and become just another brief fad. Spearheaded by Donald Keyhoe's article in True Magazine (Jan. 1950) and book THE FLYING SAUCERS ARE REAL (1950) (same title as the TRUE article), which concluded in favour of the extraterrestrial nature of UFOs, articles followed article and book followed book all pressing the extraterrestrial case. Such publicity wasn't lost on the American public and no doubt George Gallup found the climate ripe for a second Gallup Poll on the UFO issue. Jacobs relates the findings:

"Although most people, according to a 1950 Gallup Poll, believed UFOs represented secret weapons, hoaxes, misidentifications, and the like, a growing number thought UFOs might be 'something from another planet.'" (Jacobs - p.56)

By 1952, the United States Air Force was well and truly stuck into UFO investigations, and as UFO buffs are well aware, 1952 was the flap year to end all flap years! The USAF, up to their necks in sightings (many of them now considered among "The Classics"), and short of trained personnel to investigate them, hired an astronomer to act as an advisor and consultant. Although the USAF would be aware and mindful of public opinion and feelings on the UFO problem, it would be far and away more interested in outside scientific opinion on the phenomena (such as the now famous 1952 Robertson Panel and even more famous mid-1960's University of Colorado "Condon" study). Part of that scientific opinion would be gathered by Bluebook's consultant on astronomy during conferences with his professional colleagues in 1952, and was published in PROJECT BLUE BOOK - REPORT NO. 8, 31 December 1952. (It is interesting to compare these scientific opinions with those in 1971 and 1977 which are related below.) NICAP's reprinting of that report shows that:

"During the past summer a professional astronomer (J. Allen Hynek), under contract with ATIC (Air Technical Intelligence Centre) as a consultant on Project Blue Book, held conferences with 44 professional astronomers in the

U.S.A. and submitted a report of his findings...Of these, 5 had observed objects or phenomena they could not readily explain (a far higher percentage than the overall general community). The feelings of the 44 astronomers toward the investigation of unidentified flying objects were as follows:"

	<u>%Total</u>	<u>Number</u>
Completely indifferent	16%	7
Mildely indifferent	27%	12
Mildely interested	40%	17
Very interested	17%	8
	<u>100%</u>	<u>44</u>

(NICAP - p. 137)

For whatever the reason(s), although UFOs didn't go away, concern over them as expressed in terms of opinion polls, faded away for 14 years! 1966 saw published the results of two opinion polls, only one of which is well known and will be dealt with second.

In 1966, the United States Air Force found itself on the receiving end of the opinion questionnaire! The author, who had only recently enlisted in the USAF and whose interest in UFOs had only flowered a couple of years before, thought it would be a grand idea to interview USAF personnel on the UFO phenomena for sake of comparison with the "official" USAF position on the UFO phenomena (at that time under very heated attack from NICAP in particular, Congress, and the American public for this was the "Swamp-Gas" Era, the end result being the forming of the independent University of Colorado UFO Study). Anyway, my USAF survey, which was informal and oral, which sampled 590 Airmen, N.C.O.'s and Officers over a 6 month period showed that overall:

- a) 480 USAF personnel believed in the reality of the UFO phenomena (although that reality covered a wide range of explanations)
- b) 571 USAF personnel believed the UFO phenomena should be treated seriously by civilians, the military and scientists alike
- c) 552 USAF personnel believed that the USAF and/or U.S. Government either did or probably did censor to some degree or another some information it had on UFOs (which of course turned out to be 100% correct)

To the best of my knowledge, this is the only opinion poll ever done within the military branch conducting UFO investigations, while those investigations were still part and parcel of that organisation's responsibility and policy.

The UFO flap period of 1965/66 (which extended into 1967) saw another outpouring of UFO publicity as well as articles and books, in particular those by John G. Fuller (Interrupted Journey and Incident at Exeter), to help flame public opinion. Within weeks of the "Swamp-Gas" sightings, the third Gallup Poll on UFOs was conducted. The turning point had truly arrived! George Gallup tells the tale:

"More than five million Americans claim to have seen something they believed to be a 'flying saucer.' And, about 10 times as many people - or nearly half of the U.S. adult civilian population - believe that these frequently reported flying objects, while not necessarily 'saucers', are real and not just a figment of the imagination.

...almost everyone (96%) has at least heard or read something about flying saucers. For something so highly publicized as these objects, this finding may, at first, not seem unusual. However, in terms of the history of the public's awareness of other incidents or events, this figure is extraordinarily high. In fact, this awareness score is one of the highest in the 30-year history of the Gallup Poll.

...(the results represent) quite a change in public attitudes towards the credibility of 'flying saucers' since a Gallup survey conducted almost 20 years ago. At that time - shortly after the flying saucers were first noted - four out of every ten called the saucers either a hoax or a product of some overheated imagination. In 1950, another Gallup survey showed that attitudes had begun to change. More persons that year held the view that the saucers were a reality.

...One person in every three (34%) who participated in this survey said they believe life does exist on other planets." (Gallup - 1966)

By the time the next UFO poll was conducted, the USAF had gone out of the UFO business. Congressional hearings on UFOs had come and gone, and the final definitive report had been released on UFOs (the "Condon" study). There was nothing left for the UFO phenomena to do but (like old soldiers) "slowly fade away". Of course as we all know, UFOs were very much alive and well, thank you very much! Although the general public may have taken the "Condon" Report at face value, the scientific community weren't so easily snowed. Thus, while no doubt Mr. Gallup wasn't considering another UFO poll, a scientific journal, Industrial Research, was. It was conducted in early 1971. They introduced their poll as follows:

"With all the tenacity of a festering sore that won't heal, the phenomenon of unidentified flying objects lingers on long after the 'final definitive report' has been published." (Industrial Research - Jan.'71)

Several issues later, they published their results, stating:

"Unidentified Flying Objects are not as easily dismissed by the technical community as they are by government agencies and study groups. Although only 8% of the 2,700 respondents to the January 'Opinion Poll' definitely claimed to have observed a UFO, 54% believed that UFOs exist. Only 31% felt they did not exist.

Most of the survey participants believed that the government is withholding information on UFOs and 80% claimed that the Condon Report was not definitive. The respondents were evenly split as to the value of further government research to investigate UFOs.

A surprising 32% of the respondents felt that UFOs originated in outer space, 27% cited natural phenomena as the cause, and only 0.6% considered UFOs a development from behind the iron curtain." (Industrial Research - April '71)

With more and more of the scientific community coming out and expressing opinions such as the above, coupled with another UFO flap in 1973 (with resulting publicity in particular regarding CE3 cases), the time was ripe for the 4th Gallup Poll.

"The 1973-74 sighting wave, as all other sighting waves, had an impact on American public opinion. A November 1973 Gallup Poll indicated that 51% of adult Americans believed UFOs were 'real' and not products of imagination or hallucination. Furthermore, 11%, a projected fifteen million people, said they had seen a UFO, which was more than double the 5% figure in 1966. ...The poll also revealed the remarkable statistic that 95% of the adult population in the U.S. had read or heard about UFOs. This awareness was one of the highest in the history of the Gallup Polls." (Jacobs - p.296)

The New York Times report on the 1973 Gallup Poll also said:

"...that nearly half of all persons polled, or 46%, believe that there is intelligent life on other planets. This represents a sharp increase of 34% over the 1966 poll.

It is also indicated that those persons who believe in the existence of life on other planets are far more likely to believe that UFOs are real. In fact, seven in ten of those who think there is such life say UFOs are real."

(New York Times - 29 Nov. '73)

In 1974, the results of an Australian Sales Research Bureau Poll on the question of extraterrestrial intelligence came to hand. It showed that 15% of adult Australians were convinced of the existence of ETI, and a further 51% thought it possible that ETI existed elsewhere in the universe. Part of the survey involved UFOs however.

"Those people who thought there was or could be intelligent life elsewhere were then asked whether that intelligence had already tried to make contact with earth. A number of possible contact methods were presented. The unidentified flying object proved the most favoured form of contact. Forty-nine per cent thought that UFOs represented contact with intelligent life somewhere in the universe. ...The people who were convinced that other life existed were also more convinced that contact had been tried. 61% saw UFOs as an example of contact..."
 (The Sydney Morning Herald - 14 Jan. '74)

The third poll conducted on professional scientists (and the final one in this survey) was done a year later by Dr. Peter A. Sturrock, professor of space science and astrophysics at Stanford University. The results were published in 1977. It can be contrasted to the 1952 Bluebook/Hynek poll as in both cases the polled scientists were professional astronomers and members of the American Astronomical Society. However, in contrast to Hynek's survey of 44 astronomers Sturrock surveyed 2,611 members.

"Unidentified Flying Objects should be investigated further, a majority of trained astronomical observers said in a survey disclosed today. ...53% of 1,356 members of the American Astronomical Society who responded to a survey believe UFOs 'certainly' or 'probably' should be investigated further. Another 27% said that 'possibly' there should be further investigation. 17% said that any further investigation should probably not be undertaken, and 3% said that 'certainly' there is no need for further investigation of these reports." (New York Times - 17 March '77.)

"It was a surprising result, since it was - and still is - widely believed that only a small percentage of scientists regard UFOs as demonstrating anything more than the fallibility of human observation." (The Sydney Morning Herald - 15/9/79)

Other interesting data to emerge from Sturrock's questionnaire (sent to 2,611 members; replied to be 1,356 members) included such things as:

- a) Astronomers are still worried about the ridicule factor associated with UFOs as only 2 respondents agreed to waive anonymity.
- b) 75% replied that they wished to know more about UFOs.
- c) 3% estimated the probability of UFOs being "alien"
- d) 78% estimated the probability of UFOs being conventional phenomena.

Conclusions: In regarding the nine opinion polls (five public, three scientific community, one military) conducted over the first 30 years of the UFO phenomena, certain trends are evident. In general they are:

- a) Over time, an increasing percentage of the population has had at least one UFO experience (obviously).
- b) Over time, an increasing percentage of the population (including scientists) take UFOs with increasing seriousness.
- c) Over time, an increasing percentage of the population tend to give credibility to the ETI theory regarding UFO origins.
- d) Over time, an increasing percentage of the population support the idea of ETI in general.
- e) Public awareness of the UFO phenomena has reached just about the maximum possible, at least in the United States.

Based on the trends evident over the period 1947-1977, I can only conclude that with respect to points a) through d) above, those trends can only continue. Trend b) augurs well for the future of Ufology.

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*Conducted by Dr. J. Allen Hynek of members of the American Astronomical Society for Project Bluebook (Report no. 8, 31 December 1952).

Some Biological Explanations for UFO Trace Cases and Related Phenomena (PART I)by Matthew C. Dick.1. Introduction

Where low altitude UFO activity has been reported there is a possibility that several natural phenomena, if found nearby, might unwittingly be suspected as having some connection with the sighting. Even in the absence of aerial sightings, some of these could mimic certain aspects of classical types of UFO traces. This article is an attempt to bring together explanations for the most commonly reported physical traces of biological origin which might be mistaken for evidence of UFO effects on the environment.

2. Circles on the ground.

a) RINGS ON THE GRASS: 'Fairy Rings' in grassland are the result of local plant death due to the growth of the mycelium ('spawn') of mushrooms and toadstools (Order Agaricales, Class Basidiomycetes). The familiar umbrella-shaped parts are only the fruiting bodies of a much larger organism which grows below the soil surface as a tangled mass of fine pale threads. All colonies start at a single point and grow outwards in a more or less circular formation, although varying conditions can distort or obliterate this pattern. As the fungus grows it competes for water and nutrients with shallow-rooted plants such as grasses, causing them to become stunted or die. In time, the older part of the mycelium itself dies and decays, thereby releasing nutrients which may stimulate noticeably taller, lush growth of plants just inside the ring of dead grass. As the nutrient levels of the previously affected soil return to normal by leaching and other natural processes, the vegetation in the oldest part of the ring resumes its usual appearance. Old rings may be many metres in diameter and several hundred years old.

These rings of dead or dying grass may appear to have been damaged by heat, radiation or chemicals. If either the fungus or the grass is not actively growing due to unfavourable conditions, the ring may become quite indistinct for a time, only to reappear comparatively suddenly, particularly after rain. Fruiting bodies appear after rain as well, often in autumn, although it can happen at almost any time of year.

There are several ways in which these rings can be distinguished from those of more esoteric origin. Fresh or dried remains of the fruiting bodies may be found in or near the ring, but even when these are not present, a soil sample from the ring itself will usually show the pale threads of mycelium, and will be drier than a sample of soil from a nearby area. Even if the threads are not obvious to the naked eye, a microscopic examination of comparative samples will confirm the presence of mycelium in the dead zone. It should be noted here that samples of fungi decay very rapidly while moist (in as little as a few hours), and if required for future identification should be stored in a porous container e.g. paper or cloth bags, and allowed to dry.

b) UNUSUAL MUSHROOMS: There have been a few reports of unusual fungi found growing in the immediate vicinity of a reported landing, a short time after the event. Whidby Island, in Washington, USA, was the location of one such event in February 1964. An ellipsoidal metallic object was seen to 'dip' its rear portion into the ground while moving slowly around an isolated house, and 'some little while' after this visit, a 'strange' fungus was observed to be growing at the point where the object had touched the ground. This case is described in more detail in Cramp, pp 337-338. A place near Necochea in Argentina was the site of a reported UFO landing, and subsequent growth in November 1968 of giant mushrooms. Inside a 5.5m diameter circle of calcined earth were 8 giant mushrooms, the largest of which was almost 0.9m in diameter; similar cases have been reported from Santa Fe province as well (Vallee, p.38.)

It is possible that plants and soil fauna killed by intense local heat or radiation might subsequently provide enhanced nutrient levels for fungi living deeper in the soil and thereby having been protected from damage.

Competition from other species for water and nutrients would also be reduced. However, one might expect that fruiting bodies would simply be more abundant rather than larger in size following improved conditions, and it is quite possible that some other mechanism may be involved. Apparently there has been some research in the USSR on stimulation of fungal growth by radiation, but unfortunately these references were not available at the time of writing.

Several species of mushrooms occurring in Australia can grow to a very large size. The horse mushrooms (Agaricus arvensis) is closely related to the common edible field mushroom which it resembles in appearance and habitat, and can attain a diameter of 25cm (Cribb, 1974). Most bracket fungi are fairly small, but have been known to reach a width of 60cm. Another 'mushroom' (Phaeoglyphopus portentosus) has pores instead of gills on the underside of the cap, and reaches the massive dimensions of 50cm diameter with a height of 45cm. The cap is up to 15cm thick, and is dark brown above and yellowish below, while the stalk is about 20cm thick and stains dark blue when bruised. This fungus lives in Eucalyptus forests in the eastern states, but may occasionally appear in suburban gardens in Sydney.

c) FLATTENED PATCHES: Another phenomenon of interest to ufologists is the sudden appearance of flattened patches, often circular, in cereal crops. Where this is of natural origin it is known as lodging, and when occurring over large areas may be due to wind, heavy rain, hail or snow. Localized patches are most commonly a result of parasitic fungi attacking the stems or roots and thereby weakening them. Even if lodging does not happen at the time of attack, the plants may fall over in later severe weather. Like the fungi responsible for fairy rings, these also start growth from one point and spread outwards in a circle. However, they can spread quite rapidly with an infected patch growing to several metres in diameter in a few days.

'Eyespot' is specific to wheat, and may be identified by pale patches on the stems of affected plants, circular or irregular in shape and often with a darker centre. The responsible organism is Pseudocercospora herpotrichoides, which occurs in southern N.S.W. The other common form of lodging is 'take-all' which infects wheat, resulting in circular, bare patches in newly germinated crops or yellow, stunted growth on older plants. The lower stems and roots of these plants are rotten and discoloured dark brown to black; it is caused by Gaeumannomyces graminis. If positive identification of the fungus is required, specimens of affected and healthy plants (for comparison) should be dried between stacks of newspapers under pressure (such as heavy books or bricks on particle board). The paper should be changed daily until the specimens are dry, and the latter can then be placed in sturdy envelopes to prevent later breakage.

Some animals leave flattened patches in long grass where they have rested for a time. Cattle, sheep, foxes, hares, kangaroos and many other mammals may do so; kangaroos sometimes dig out a shallow hole to lie in, either for contact with cooler subsurface soil or to make their large hips more comfortable. The source of such traces should not be too difficult to deduce from the size and shape of the area of flattened vegetation, and the presence of footprints droppings or the animals themselves nearby. Failing this, hairs found at the site can be used by mammalogists to identify the species responsible.

d) DYING TREES: Patches of dead trees and shrubs are sometimes found in otherwise healthy bushland. If the damage is recent, parts of the plants may seem to be unaffected, and leaves will still be attached to dead branches. From a distance, the effects of such damage can resemble the effects of a local fire, but on closer examination some low-growing plants or branches will be found to be intact, and the leaf litter will be unburnt. Several types of root-rot fungi can be responsible, one of the most common being Phytophthora cinnamoni which occurs patchily throughout N.S.W. and Queensland; it has recently spread to Western Australia and Victoria. The spores of this fungus are produced underground and are able to migrate short distances under their own power, but dispersion over greater distances is by passive transport in soil water. Patterns of attack are closely related to soil drainage, and plant deaths are most likely in poorly drained areas after heavy rain.

Diagnosis of this or other soil-dwelling fungi is difficult, as those symptoms visible to the naked eye are similar to simple water-logging, and occur in much the same conditions. If positive identification is required in order to eliminate other possible causes, several samples of recently dead twigs or branches should be collected, ensuring that the cambium (green layer under the bark) is dried out in appearance while the sapwood is still moist. It is only from these recently infected tissues that the fungus can be isolated and cultured. Material which has been dead for some time (indicated by a brittle fracture and dry sapwood) can harbour many species of saprophytic fungi which can obscure the original infection. In the case of suspected Phytophthora attack, the samples should be placed in a sealed container and delivered to a laboratory as soon as possible, as the fungus must be alive to be identified. This fungus is highly infectious, so field gear such as secateurs, spade, boots and other items in contact with soil or infected plants should be sterilized with bleach before being allowed in contact with domestic gardens (Bruhl, pers. comm.)

3. Powdery Deposits.

a) SMUT FUNGI: Smuts are parasitic fungi of the Order Ustilaginales in the Class Basidiomycetes. The mycelium of these organisms lives inside the leaves or stems of plants and produces a dark powdery layer of spores on the surface which could be easily mistaken for deposits of external origin. Microscopic examination of this 'dust' is usually sufficient to identify its source, as the spores are relatively uniform in size, approximately spherical in shape and generally with a distinctively sculptured surface. Unlike airborne dust, the patches are dense and discrete, and can occur on the undersides of leaves and twigs as well as anywhere else on the plant; they are also fairly specific to particular species of plants. While this latter characteristic may not be helpful in separating natural from 'unnatural' causes in crops (where only one species of plant is present), it can be a useful guide in mixed plant communities. If a positive identification is required, collection and preservation of specimens should follow the procedure described earlier for lodging fungi (Walker, pers. comm.)

b) SOOTY MOULDS: Sooty moulds (Order Capnodiales, Class Ascomycetes) superficially resemble the smuts, forming dark powdery deposits of spores on plants. They differ from the smuts in that they are saprophytic (feeding on dead or decaying material) rather than parasitic; their mycelium is external to the plant tissues, and while some plants harbour them more often than others, they are not species-specific. Sooty moulds generally grow on sugar, sap or gum exudates from plants; these may be from healthy specimens (e.g. nectar runs from Banksia flowers), from physically damaged plants (e.g. gum from Acacia or Eucalyptus) or from plants parasitized by insects which produce waxy or sugary secretions (e.g. Leptospermum spp. - tea trees). In most cases the substance on which the mould is growing is fairly abundant and its source is not difficult to determine. In some cases, though, trees could have nectar-laden flowers or insect infestations in upper branches, and the origin of the substance may not be immediately obvious from the ground (NSW Dept. Agriculture, 1974).

c) SLIME MOULD: These very primitive fungi belong to the class Myxomycetes, and spend most of their lives as amoeba-like organisms in damp places. In favourable conditions - generally warm, damp spring weather - large numbers of the amoeboid phase coalesce to form a plasmodium. This can be slug-like (though very small) in some species, but more commonly occurs as a thin slimy layer climbing onto vertical surfaces such as plants, fences or walls; colour ranges from yellow, pink or grey to almost colourless. As the plasmodium dries, the slimy protoplasm undergoes cellular changes to form a mass of small rounded or club-shaped granules which can resemble a mass of insect eggs. These sporangia contain the spores and vary greatly in colour, being pink, yellow, green, purplish, brown or grey. The patches of sporangia range from 1cm² to 1m² in area, and are sometimes almost perfectly circular in shape. With their bizarre appearance and their ability to appear overnight it is easy to see why they have often been mistaken for evidence of more unusual visitations.

A low-power hand lens will reveal the approximate uniformity of size and shape of the sporangia, and if a few are crushed, microscopic examination

will show the rounded, sculptured spores typical of fungi. In contrast, the size of soot or dust grains varies considerably, and they are irregular in shape (NSW Dept. Agriculture; Walker, pers. comm.)

(To be continued in the next issue of the ACUFOS JOURNAL.)

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ACUFOS Bibliography Service: Life in the Solar System - Mars (Part 2-Post Viking)by John Prytz.

Compiler's Note: The importance of discovering the existence of even the most simple form of extraterrestrial life can not be understated. The closest anyone has come to the definitive answer to date has been with respect to the American Viking experiments. Viking yielded a very definitive "maybe" to the question of life on Mars. Part two of this bibliography on the topic of "Life on Mars" covers the Viking era through the present. In addition to this bibliography, interested parties are also directed to scan major newspapers for the latter five months of 1976 for a "blow by blow" coverage of the experiments as they evolved. THE NEW YORK TIMES is in particular recommended, as lack of space prohibits presenting every newspaper entry in existence. For similar reasons books and articles on general planetary astronomy, Mars & Viking in general, exobiology and ufology have not been listed, even though parts could be related to this topic.

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