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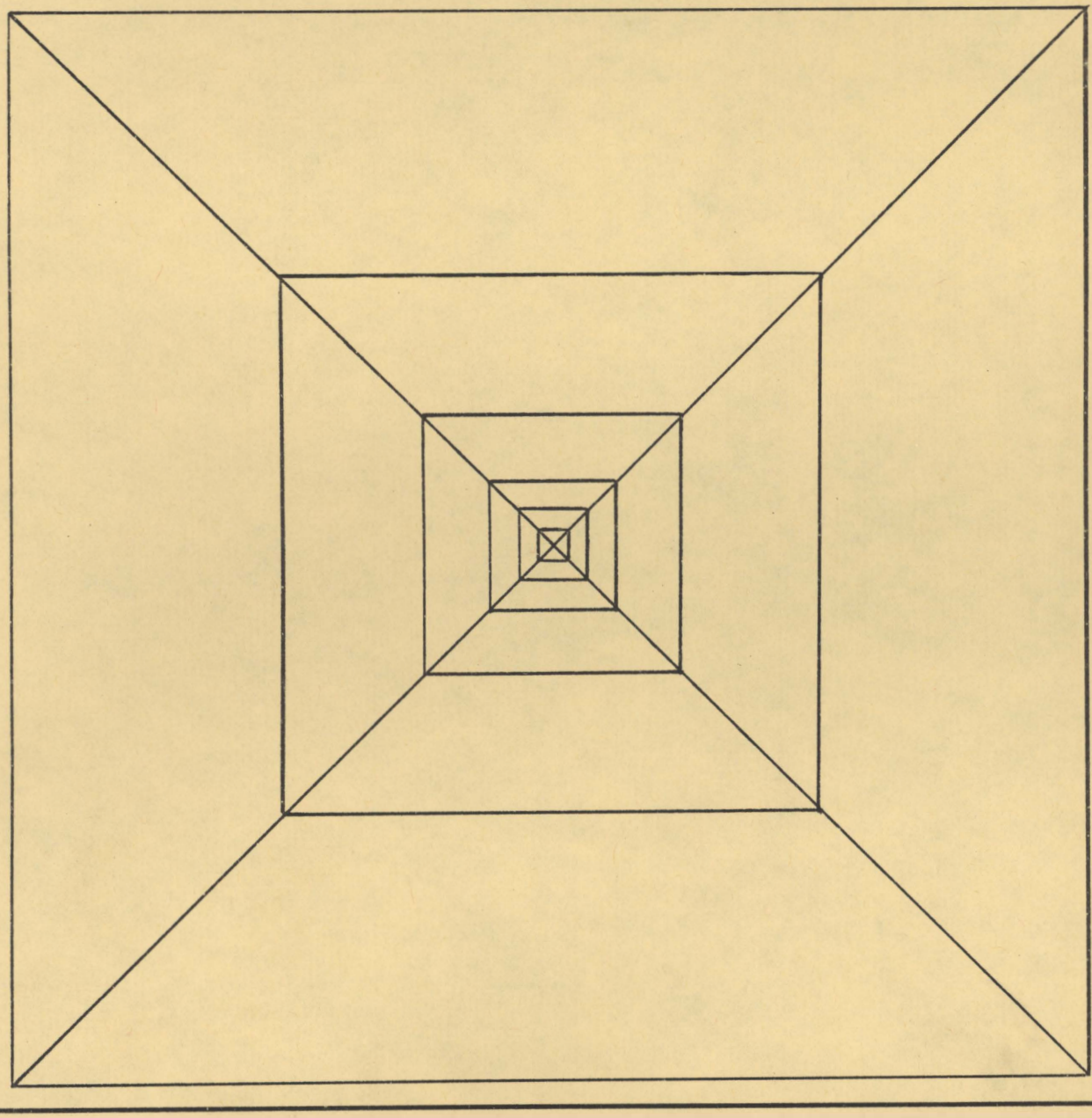

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## Editorial

by H. Griesberg & K. Basterfield.

We continue to receive overseas requests for information on the Centre, and so we will take this opportunity to present some details of what services we provide.

The Centre is managed by two Co-Ordinators, Harry Griesberg of Gosford NSW and Keith Basterfield of Adelaide, SA. Both have been interested and active in the field since about 1967. Keith is presently also the Liaison Officer for UFO Research (SA) Inc. and Continental Co-Ordinator for Australia and New Zealand for MUFON (USA).

A copy of all interesting UFO reports investigated by ACUFOS member organisations within Australia is held by the Centre in a centralised library. Access is available to all UFO researchers associated with ACUFOS, and copies of reports are available at a nominal service fee to cover photocopying and postage. Details of each report labelled an "unknown" as well as all "identified" (e.g. aircraft, balloons, satellites, fungud etc) are placed on a computer file run by Mr. Andy Cole of Sydney. This computer file is able to produce printouts of details on file upon request. Copies of the total file printout are available through the Centre at a nominal service fee. Summaries of reports are produced annually and are available from the Centre's Document service.

The past three years has seen the establishment of specialist study groups associated with the Centre. The Australian Entity Study Group (AESG-headed by Keith Basterfield), the Australian Photographic Study Group (APSG-headed by David Reneke) and the Australian Physical Evidence Study Group (APESG-headed by Bill Chalker) are all concerned with specific aspects of the phenomena and reports of the various kinds are studied in depth by the respective group. So far, the AESG has published several Case Documents and reports. The APESG and APSG hope to eventually contribute in a like manner.

Consultants are available with specialist knowledge in the fields of

physics, photographs, physical artifacts analysis, hypnotherapy and chemistry to advise where necessary.

For some time now, ACUFOS has concentrated on producing a series of research documents on the subject and so far has produced the following:

ACUFOS D1-Summary of cases reported to the Centre in 1978.
D2-Reports from Aircraft crews in Australia
D3-Indepth review of entity cases, Australia & New Zealand.
D4-Summary of cases reported to the Centre in 1979.

It is intended to publish more and more documents of this kind in future. From January 1st, 1980, we initiated a publications service for all Australian researchers interested whereby the Centre would publish material on behalf of an Australian author.

In summary, the ACUFOS is actively promoting and supporting research into the UFO phenomena within Australia.

NOTE: For further information on ACUFOS:
(a) Within Australia, send a S.A.E. (20x10cm) with 22cents Stamp
(b) Overseas, send an addressed envelope (20x10cm) together with international reply coupons to the value of Australian 45 cents.
to ACUFOS, P.O. Box 546 Gosford N.S.W. 2250 Australia. s

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## Information Needs Of Ufologists. by John Prytz

Information is as basic a resource to the needs of mankind as any other. Information however is increasing at as fast a rate as natural resources are decreasing, even faster! This exponential increase of information cuts across the spectrum of human interests - ufology is no exception. The task facing ufologists to an increasing degree is to not only keep up to date (input), but to use techniques that organise the masses of data such that retrieval of information (output) is rapid, accurate (highly specific) and as complete as the data base allows. The degree of magnitude of the problem can be seen in the author's own UFO (and related) data base, in that the information content for the period 1975-1979 is almost triple that for the period 1965-1969. The author fully expects this to triple again during 1985-1989!

A well kept personal UFO library (in the broadest sense) is an investment well worth the time and effort needed. Anyone can aquire and store information, but storing it does nothing - information is for using! Although various limiting factors such as money, space available, and time place constraints on any library, a small but well organised library (with specific policies for inputs and outputs) can be far more valuable a resource than a massive collection which has no organisation. Unlike a public library which must be all things to all people, a ufologist's personal library is highly specific to the needs of the user. However, like a public library which must be interdisciplinary in scope, a ufologist's data base will also be interdisciplinary, which reflects the nature of the subject ufologists study. Compounding the problem of information input and output for the ufologist is this factor. Although not all ufologists will have the need to collect and use information in all related areas, a good UFO data base will contain more than just the term "UFO" in the titles comprising that data base. There would be many ufologists needing, collecting, and using material in the areas of psychic phenomena, the paranormal, psychology and sociology, religion, astronomy, SETI, exobiology, astronautics, atmospheric physics, and anthropology/archaeology. As the specific needs vary, so too would the specific systems needed to cope with input and output. However, there are generalities which cut across the information needs of ufologists collectively, starting with the types of forms information comes in.

Types of Forms of Information: Assuming that a ufologist knows their information needs, they will find a wide variety of forms that information can come in.

Although it is rare that a ufologist will restrict himself (or herself) to one or two types, never-the-less, some forms require a greater investment in time and money than others. Without getting into the sticky problem of "cost/benefit" analysis, the basic forms are:

1) Monographs (usually hard-copy books)
   a) General (where only part of the volume is of interest)
   b) Special (where all of the volume is relevant)
      1) Published by general publishing houses (available in stores)
      11) Published by speciality publishing firms

2) Serials (regular)
   a) Newspapers
      1) Hard copy
      11) Microfilm
   b) Journals/Magazines
      1) General (containing 1 or 2 articles of interest)
      11) Special (where everything is of interest)

3) Irregular Information Sources
   a) From radio & television
      1) On tape
      11) Transcripts (hard copy)
   b) From conferences, conventions, congresses, hearings, etc.
      1) On tape
      11) Published in "Proceedings of..."
   c) From "official" sources (governments and government departments)
      1) Press statements & handouts
      11) Congressional testimony, Parliamentary questions/debates, etc.
   d) From private individuals
      1) Letters
      11) Unpublished papers etc.
   e) From non-government agencies (scientists, research institutions, universities and colleges, etc.)
      1) Letters
      11) Re-prints, off-prints and pre-prints of publications
      111) Press statements
      1V) Lectures (taped or hard-copy)

Of course before the ufologist can gather in any or all of the above, he/she must first know of the existence of the sources (actual) or likely sources and the existence of material from those sources. So, what tools can assist the ufologist in terms of input?

Input (keeping up to date): Any ufologist (old or new) must of course keep their files up to date. Although information can accrue haphazardly with little effort on the part of the ufologist other than through what would be normal day-to-day routine (reading the morning newspaper, watching the evening news, etc.), normally the ufologist must make some effort (go out of his/her way) in order to insure that all bases are covered. This section will cover what others have done for the benefit of information seekers in general, including ufologists. The basic tool is the local public library.

Most general public libraries will contain many of the basic reference tools that will enable a ufologist to discover new pieces of basic information of interest. The great part about it is that the discovery process is free (even if permanent acquisition of material isn't).

1) Monographs (books) currently in print can be discovered in-(Publishing houses (general & special) also put out catalogues which are available either directly upon request or in libraries)
   a) "(American) Books in Print" (author, title and subject)
   b) "Australian Books in Print"
   c) "British Books in Print"
   d) "Canadian Books in Print"

2) Current serial titles can be discovered in
   a) "Ulrich's International Periodicals Directory"
   b) "Current Australian Serials"

3) References to new and old journal article titles are contained in
   a) "(American) Public Affairs Information Service" (PAIS)
   b) "Australian Public Affairs Information Service" (APAIS)
   c) "Reader's Guide to Periodical Literature"
   d) and other various (and usually specific) serial indexing publications.

4) Newspaper articles are rarely indexed, although (for example) indexes do exist for "The New York Times" and "The Times (of London)" among the major international newspapers. Within Australia, major newspaper articles will be found in APAIS, and all the major Australian newspapers maintain their own libraries (mainly for the benefit of their own journalists however, but) which the members of the general public can contact for assistance, given that the request is reasonable.

5) Government publications: Lists of all non-classified government publications are issued by most countries, and most Australian libraries will have on reference the listings of most major English speaking countries. For Australia, see "Australian Government Publications".

There is more than one way of finding out about the existence of available publications of course. Reference tools (which libraries must use themselves to pick and choose from in terms of their acquisitions) are only the first resort, and acquisitions librarians rely on more than that . Some, like various library journals, would be of little use to ufologists, even though they contain various listings and reviews and recommendations of new books and journal titles (however, this is a tool I find useful).

A major secondary methodology is to scan the card catalogues (or increasingly micro-fiche catalogues) of public libraries. This is most useful for books. Another way is to constantly scan the book review sections of journals and newspapers, as book reviewers often receive books prior to actual publication or availability. Reviews also help in the decision making process regarding whether or not to shell out the money for a new publication.

Journals and newspapers often carry advertisements for new books and sometimes new journals, either through the publishers and/or the agencies (bookstores) carrying the product.

Bibliographies (of a more select nature other than that presented by the professional indexing services) are readily available. A current book or journal article will often contain a formal "for further reading" section, and/or footnotes and/or references which can be acquired (either by purchase or by photocopy) with a bit of effort. Libraries, as part of their services to their clients, will often compile bibliographies upon request. Some speciality journals contain as a regular feature a bibliography column (such as the ACUFOS JOURNAL). Massive bibliographies are sometimes published as a book in their own right, such as Lynn E. Catoe's "UFOs and Related Subjects: An Annotated Bibliography" or NASA's "Extraterrestrial Life: A Bibliography". And the effect can snowball. One book/journal with 10 references each may yield another 10 references, each may yield another 10 references, etc., backwards in time.

Indexes to specific journals, published by those journals, are not uncommon (though sadly lacking in almost all ufology journals). (Ed.Note- ACUFOS will be publishing an index to all issues of the old ACOS BULLETINS in the very near future.)
These are often published within the journal either quarterly, and/or half-yearly, and/or yearly, or sometimes as a separate publication every 5, 10, 15, 20 or 25 years (or longer).

So, various institutions and tools can be used to keep up to date in addition to discovering older references which may be of interest.
The next obstacle is availability.

Availability of Information: Given that one has found something of particular interest, and wants it for their own personal data base, the obvious problem arises of acquiring that item(s). Sticking with the legal (or quasi-legal/ illegal) methods, there are two possibilities that arise. Either the item(s) is currently available, or it is not!

If the item is currently available (in print, on the newsstands, etc) one can buy it directly or order it. (It is far, far cheaper to order books- other than Australian - from an agent directly overseas than it is to buy those identical books off the shelves of the local bookstores. The savings can easily equal 50% or more for hardbacks. Of course one assumes that time is no object as the wait can be from 3 to 6 months.)
Living in Australia however often means that news of "new" items from overseas are out of print or unavailable directly by the time we find out about them. A good ufologist must of necessity be expert in obtaining hard-to-get material! However, with modern technology, that isn't as hard as it used to be.

1) Libraries are repositories for information. What they don't have on tap, they can acquire through extensive inter-library loan services, at least as far as books is concerned.
   Many libraries have extensive collections of journals, often in bound form. Through the use of micro-film, even small public libraries can hold extensive collections of newspapers, and such libraries have micro reader/printers.
   Photocopyers are readily available for the copying of material from whatever historical source is required. However, it is in this area that sticky legal problems arise (for those who are concerned about such things) because of the provisions of the Copyright Act.
   Various reference tools exist to assist those in waiting to know which Australian libraries hold what collections of various materials. For example, there exists a guide to "Newspapers In Australian Libraries" which is in two parts, overseas newspapers, and Australian newspapers.

2) Second hand bookstores can be (are) an invaluable resource for obtaining (upon luck of course) those out of print items.

3) An obvious, but frequently unmentioned resource are the collections of fellow ufologists, which (upon permission) can be photocopied or purchased (if advertised in journals/newspapers or otherwise known to the ufologist).

Of course it is far easier to acquire information as it becomes available relative to back-tracking after-the-fact!

1) For books, one either orders what is desired and/or obtains what is desired directly off-the-shelf in the local bookstore. (If only part of the volume is required, a photocopy of a library copy is probably cheaper. Sometimes in fact it is cheaper (but illegal) to copy an entire book than it is to buy it).
2) For journals (where the entire contents are wanted), the best methodology is direct subscription.

3) For journals (where only the every-now-and-again sub-part of an issue is of interest), the obtaining by direct purchase from a local newsagent is obviously the way to go, or photocopy from the local library (whichever is cheaper).

4) For newspaper clippings, there is no easy way. One must either
   a) Subscribe to a news clipping service (which is costly), or
   b) Read at least 1 local, 1 out-of-state, and (ideally) 1 foreign newspaper per day, in addition to
   c) listening to 3 major radio/television newscasts, 1 each in the morning, noontime and evening which will clue one to what is likely to appear in print the next day.

There is of course another (but complimentary) way of both finding out about and acquiring information relevant to one's needs (there being no real substitute for personal initiative). In the trade, we call it SDI, which stands

for Selective Dissemination of Information. Examples have already been given above in terms of subscriptions to newspaper clipping services and subscriptions to journals. Both are SDI. However, there is another form of SDI if one is really organised. That is, being alerted to interesting material by family, close relations and neighbors/friends (other than fellow ufologists) who by accident stumble across material, even if they don't themselves have an interest in ufology or related subjects. The range of material, scanned in the normal course of their interests, which may every now and again include material relevant to the interest of a ufologist, can be increased from 10 to 1000% or more! Some of my choicest jems have come through such sources! Informal word-by-mouth information is a major source.

Given that the ufologist knows about a piece of information, and has been able to acquire it (in useable form of course - there is no point in having an LP unless one has a record player; a cassette tape unless one has a cassette recorder; a magnetic tape unless one has a computer, etc.), the next step is organising that information for retrieval. Although it takes a lot of effort, here is where the ufologist can do a lot for themselves.

Retrieval - What Ufologists Can Do For Themselves: When it comes to the retrieval of information, the cardinal rule of all rules is NEVER RELY ON MEMORY! The human brain is good, but no substitute for A FORMAL SYSTEM OF INFORMATION STORAGE. HOW OFTEN HAVE YOU FOUND YOURSELF in the position of knowing that you saw something, sometime, somewhere, but haven't a clue what the source was, hence spent countless hours of frustration in what probably proved to be a fruitless search? I know I have! And if the source is a book but without an index (as many UFO books are), the search can be as equally time consuming, which is why a book without an index (unless it has a damn good table of contents) is all but worthless in terms of information retrieval.

A major priority of any personal library should be a good standard reference (general) collection, including at least a dictionary, an encyclopaedia, and a "World Almanac" or "Information Please" or something similar. A more specific set of reference tools geared to the particular interests of any ufologist is another priority (for example in my case I maintain up to date dictionaries in general science, geology, astronomy and biology; an encyclopaedia in science and technology and another one in astronomy, etc.).

For larger personal collections (greater than several hundred items), a basic card catalogue is helpful, and can include not only books, but sound recordings (LPs and tapes), pamphlets, journals, etc. and right on down to individual articles, private papers, letters, newspaper clippings, press statements, etc. if desired. My own card catalogue (typed on 3" x 5" cards) contains entries for each author (or editor, compiler, composer, narrator etc.), title (and alternative titles as they can differ depending on edition, country of origin, or form), corporate author (i.e: NICAP, NASA, etc.), and subject(s). The physical form is also indicated (ie: paperback, hardback, softbound, sound recording) and extra details like dates and editions can be typed in as well if desired. "See" and "See Also" entries can be most useful such as "NASA (see) National Aeronautics and Space Administration", "Keyhoe, Donald (see also) NICAP", "Flying Saucers" (see Unidentified Flying Objects", "French, Paul (see) Asimov Isaac", "Star Wars (see also) The Empire Strikes Back". "Unidentified Flying Objects (see also) 1) Aerial Phenomena 2) Project Bluebook, 3) University of Colorado UFO Study, 4) individual sightings/cases (ie: Socorro, New Mexico; Tunguska, Siberia; etc.), 5) Extraterrestrials (on earth), 6) Exobiology, etc.". This personal catalogue brings together all the authors, titles and subjects in my own collection.

Shelf arrangement (for books, cassettes, records etc.) can be important, and arrangement depends upon the needs and whims of the owner. In my case, different book cases and individual shelves contain different general subjects, although in the first instance (because of how tall various shelves are) paperbacks are usually apart from hardbacks, which are apart from records. Sub-arrangement varies depending on subject. Exobiology and UFOs are arranged by author; archaeology by geographical region hence country; earth sciences by land, water and air facets; science fiction by books of science fiction (subdivided by author)

and books about science fiction (subdivided by various categories such as encyclopaedias, essays, histories, magazines, films, etc.). One could of course arrange everything by author or title (although my card catalogue does that for me) or colour or height or geography, etc. The possible permutations are infinite and in the final analysis depends on the types of storage the owner has, his/her needs, etc. Although a formal classification scheme isn't necessary (such as found in professional libraries), many individuals invent their own simple classification schemes (such as "A" ='s astronomy, "B" ='s biology, "a" ='s Australia, "u" ='s United States, "1" ='s dictionary, "2" ='s encyclopaedia "3" ='s history, etc. so that "B1" is a dictionary of biology, "A3a" is a history of astronomy in Australia, etc.), and arrange their collection accordingly including that data on their catalogue entries.

Items like journals, individual journal articles, press statements, private clippings, newspaper clippings, letters, etc. aren't usually stored on shelves like books and records. These items are usually filed in folders and filing cabinets. Whereas books, records, cassettes, etc. are normally one-copy-only items (which can have multiple entries in a card catalogue system), things like journal articles, press statements, private papers, letters etc. can easily be multi-copy-items and placed in two, three, four or more individual files (say a couple for subjects, one for geographical region, one for author, one for form, etc.) if such is desired. However done, it should be as highly specific as possible to reflect the needs of the user, where the subjects are sub-divided by facets of that subject and arranged by date and geographical region (or geographical region hence by date), and important authors have their own files etc.

Whole journals are usually arranged in files chronologically, and are usually one-copy items, making access difficult. One (expensive) way would be to make one or two photocopies of each article for a subject and author file. Another way would be to include each and every article as a separate card catalogue entry (very time consuming). Ideally the journal would publish its own index, but many won't, including the speciality journals of particular interest to ufologists. Thus, many ufologists are either forced to make basic author & title indexes to their favorite journals, rely on indexing services (which don't usually index non-commercial speciality magazines), or else rely on memory, compile personal bibliographies, or rely on bibliographies prepared by others. How the ufologist copes depends to a large extent on how much they rely on the contents of whole journals, the time they have to spend, and per haps their financial abilities. In their current state, I personally tend to underuse the speciality journals because of the problems of access associated with them. Modern technology may provide another solution however (see below).

In summary of this section however, let me say that the key(s) to retrieval of desired items, not known in advance of course, are multi-access catalogue entries and files, based usually along the lines of subject (as highly specific as possible), author, and form, plus some system of logical arrangement of material (usually by form, hence by subject).

Ufologists aren't isolated but have many other individuals and organisations which share their interests. Thus, ufologists can often assist each other, both in terms of input and output (retrieval).

What Ufologists Can Do For Each Other: Although there is little substitute for personal involvement in updating and maintaining and organising one's personal data base, ufologists collectively can do much to assist each other. Though no doubt many more ways exist, I see some of the basics as being:

1) Ufologists providing wherever possible bibliographies, footnotes, and/or references in their journals, books and papers.
2) Ufologists compiling indexes to their books and journals
3) Ufologists advertising themselves in the general media (which also assists in getting new people interested in ufology)
4) Ufologists (either individually or as collective organisations) acting as "public information officers" for UFOCONS, or by writing letters to the editor, or attempting to get into the media (paper and electronic) relative to always staying within a small "in circle" community.

5) Ufologists (given time, money and/or expertise) increasing the availability of information through legal means (such as was done recently in America using their "Freedom of Information Act")
6) Ufologists sharing (in particular) very rare, historical, or otherwise hard to come by information.
7) Ufologists putting into useable form material they may have like making cassette tapes of sound recordings, or transcripts of cassette tapes, etc., for the benefit of others, which can include making indexes to sets of journals, compiling bibliographies, etc.

Ufologists could (and should) do more than just share their ideas about UFOs (which they do very well), by sharing their information about UFOs. No two ufologists would have identical data bases. Each one is unique in some aspect. Just as professional libraries form networks in order to re-enforce the collections each has, so too could private ufologists form networks, one benefit being a reduction in the duplication of effort. One way could be the introduction of modern technology.

Technology and the Information Needs of Ufologists: By the term "technology" I mean basically the introduction of computers towards the field of ufology. Computers have already been in use in terms of compiling information about UFOs themselves (the American and Australian UFOCATs), but not information about information about UFOs!

Hundreds of data bases are already stored on computers, and many libraries (usually the larger or more specialised ones) have linked into the network they create, including Parliamentary Libraries, CSIRO libraries, the National Library of Australia, etc. which not only includes Australian data bases, but spans and scans the major countries of the world via telecommunications satellites. No doubt these hundreds of computer data bases (in all fields of science, technology etc.) contain hundreds of thousands (if not multi-millions) of entries by now, would contain much of interest to the average ufologist. Consult your local library for details of access.

On a more personal level, the cost of owning a personal computer is well within the range of many private individuals, and the knowledge required to operate one isn't as extensive as many would think. Although useful from many angles (playing games, home finances, shopping lists, lists of addresses and phone numbers, etc.), any information that can be stored on a piece of paper can be stored in a computer (bibliographies, names of authors, titles of books, articles of journals, specific dates, editions "SeeAlso" references, indexes, etc. that you own, plus the data bases of other ufologists, including their names, addresses and telephone numbers, etc.). It is possible that within say 10 years that every personal ufologist could have at the touch of a button, the data base (and indeed data) of every ufologist in the world as well as references (and even full text) to millions of items of data relevant to the particular information needs of that ufologist that are stored in the data bases of libraries around the world! Such is the expansion of information and technology that such projections are not science fiction - it already exists within professional library circles. Of course your computer would have a print-out machine for obtaining hardcopy, and slightly further in the future, machines will exist that will transcribe sound recordings, cassette tapes, telephone conversations, etc. into hard copy. And, no doubt before the lifespan of the average person reading this has reached it's allocated three score and ten years they will find that ALL information will come via a computer and VDU (visual display terminal), including books, journals, newspapers, (TV/radio) news, private letters, etc., all of which can be stored (for future retrieval in an almost endless variety of permutations). Acquisition will be at the touch of a button (whether to the nearest computer bookstore, newsagent, or library) where you will be billed automatically via the same computer network and have the funds deducted electronically from your automatic bank account! The shorter "long-range" plans of this author will be to get a personal computer to assist in the coping with the "Brave New World" that will, indeed must, come. However, until that day (already partly here) fully arrives, it's back to earth and the establishment of a less automated routine.

In Summary - Establishing A Routine: Information handling, both in terms of

input and output, requires some sort of set, systematic, organised, day-in-day-out, routine. The basics I believe include for:

1) Input (such routine as)
   a) Regular visits to as many libraries as you can get to or have access to, including public libraries, state (or even the National) libraries, newspaper libraries, university libraries, etc.
   b) Taping (just in case) at least one radio/TV news and/or current events programme per day, and reusing the tape if nothing comes to light. That will result in from two to maybe twenty items of interesting data per year on record depending on particular interests. I would personally suggest taping the ABC 7:45 am news plus "A.M." from 8 am to 8:30 am.
   c) Scanning from two to three newspapers per day.
   d) Paying regular visits to as many bookstores and newsagents as is possible, not only for new books, but for browsing around the contents of current magazines (which otherwise wouldn't be worth subscribing to) for that every now and again article (which when discovered you can either make reference to, purchase, or photocopy at a later date).
   e) Subscribing to as many particular journals as finances and space make allowances for.
   f) Subscribing to a newspaper clipping service (if costs allow).
   g) Make use of informal SDI networks.
   h) Making a habit of scanning book reviews
   i) Invest in or investigate "the new technology".

2) Output (such routines as)
   a) Establishing a personal cataloguing system.
   b) Establishing a personal filing system.
   c) Making a) and b) as highly specific as possible, but...
   d) As flexible as possible, and...
   e) Using "multi-access" to your information data base as much as possible.

NOTE: The author would like to acknowledge the recent Parliamentary Librarian's Conference (Parliament House, Canberra - 11/12 August 1980) which had as a theme "information needs of members of parliament" as the overall inspiration for the above article.

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## A Short Review of Australasian Radar Cases 1954-1969

by Keith Basterfield.

Whilst in the process of reviewing UFO reports involving radar observations as background reading to a study of the New Zealand radar/visual events of 21 December 1978 (1) I came across four earlier Australian and New Zealand events about which I had previously heard little.

In view of this and due to the level of interest in the NZ events of 1978 I'd like to review these four cases based on the details which have so far been uncovered. I'd appreciate hearing from anyone who may know of more information on these events or in fact can provide additional radar events.

Our first radar/visual event was reported to have occurred on 15 December 1954. Naval pilot Lieutenant O'Farrell was flying at 220 knots, at 15,000 feet above Goulburn, NSW in a Navy Sea Fury aircraft, when two lights "with vague shapes underneath them" were observed to flash past his aircraft, "spinning at fantastic Speed". Nowra Naval air station radar was said to have registered two strange targets besides the plane. A check later showed that there were in fact no conventional aircraft in the vicinity of his plane at that time. (2)

The second event concerns one Edward Tindale who was a radar observer at the Mackay, Queensland, meteorological office. On the night of 10 June 1960 he reported observing an unidentified stationary target on the radar on two separate occasions, at 10.30 p.m. and 11.30 p.m. Both targets were in the

area where an aircraft had crashed on that night. The Board of Inquiry in to the aircraft disaster could not find a reason for the plane to have crashed (3).

On the 13 January 1965 seven unidentified flying objects were picked up on radar over the Tasman sea between Australia and New Zealand. The objects were detected by an aircraft at 8.50 p.m. They were flying at 45,000 feet in a V formation heading east. The sighting was confirmed by the Civil Aviation Department and a possible explanation that the objects could have been cloud formations was given. (4)

Our fourth event is reminiscent of the 1978 NZ events as you will see from the description below.
Shortly before 7.30 p.m. on 4 September 1969 a Bristol Freighter took off from Wellington on the North Island of New Zealand flying to Blenheim on the South Island. As the plane was climbing towards 3,000 feet, Wellington radar advised an unknown target was 4 miles dead ahead of them. The aircraft overflew the coastline and turned south when the First Officer Faircloth spotted a bright, blue, pulsating, flourescent light below them and to their right. It was an estimated 2 miles from the aircraft. Wellington radar was informed of this observation and advised them that they were tracking the object that the pilots were watching.
The object was determined to be travelling at only 50-60 knots with a North wind of 30-35 knots, thus making its air speed only about 25 knots! The blue light flashed every 2-3 seconds whilst maintaining a steady southerly course. Brightness was estimated at magnitude one.
The pilots watched for 2 minutes after which their aircraft left the light behind, although Wellington continued to track it. Some 90 minutes later on the return trip another object was seen from the plane. This time it was a cluster of lights over Cape Campbell. Wellington confirmed this was the same object as before and said that they were still tracking it. (5)

(1) See "A look at the available information on the 21st December 1978 NZ incidents", ACUFOS Journal Vol 1 No 3 pp3-7. Also UFO Research-Australia-Newsletter Vol 1 No 3.
(2) From "UFOs over the Southern Hemisphere", M. Hervey, Horwitz, Sydney, 1969 pp35-36.
(3) "Flying saucers are hostile", B. Steiger and J. Whritenour, Tandem, NY 1967 pp 26-27.
(4) FSR 11/2/28 quoting "New Zealand Herald" 14 January 1965.
(5) "NZ aircraft-visual-radar case" by Harold Fulton, FSR 16/1 pp23-24.

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## UFOCON 5 - Australia's 5th annual UFO conference

This year's annual conference, to be held on November 20 & 30 and December 1, will take place over the three days at the Belconnen Way Hotel, Belconnen A.C.T. The Australian Centre for UFO Studies is sponsoring the three day conference of leading scientifically oriented Australian UFO Research Organisations.

The aims of the conference include discussions on the scientific study of the UFO phenomena, techniques of investigation, lines of inquiry, and determining the future of UFO research in this country.
Papers to be presented include: "Geological causes for UFO landing traces" - "Psychological reactions to UFO events" - "UFOs-an explanation for certain close encounters in terms of known psychological processes" - "The UFO physical trace experience in Australia" - "UFO photographers are very peculiar people" etc.
Once again this year, members of the public will be allowed to attend as silent observers.

## The Fly in the C.E.T.I. Soup: The "L" Factor.

by John Prytz.

Of all the deep philosophical questions that has challenged mankind throughout the centuries, one of the most often asked and puzzled over is something along the lines of "when I look to the stars twinkling in the night sky, who or what is out there looking back at me?" In other words, "are we alone in the universe?" While the speculations of science fiction writers on that very question would fill a good sized library, until recently (post World War Two), the more serious scientific speculation and study on such a topic was only rarely tackled. However, given this modern era of space flight, the development of radio astronomy, and in general the information explosion of data that have a relevant bearing on the topic, the question is becoming less and less a mental excercise or topic only suitable for literary fiction, and more and more a true experimental science. But, alas, a science still very much in search of a subject!

That in fact is the key problem revolving around the new science of exo-biology (Greek - exo, outside; bio, life; logy, science), or outside life science - the study of life beyond the Earth. None is currently known to exist - suspected and expected, yes; actually confirmed, no.
We have a universal physics and chemistry but not biology. Life is still a one-shot miracle, not a statistic. The name of the game and function of exobiology is to determine whether or not life is a universal phenomena; to answer the question "Are we alone in the Universe?"

Although the on-site discovery of an extraterrestrial virus on Mars, or a bacterium hidden away in a carbonaceous chrondrite (meteorite) would do this, what mankind really quests after is extraterrestrial intelligent life (ETI) our equals (in intelligence and technology) or better. That sub-branch of exobiology that searches for ETI is termed (obviously) SETI - Search for Extra-Terrestrial Intelligence - via the detection of any artificial phenomena only attributable to an extraterrestrial and technological civilisation. This could mean looking for archaeological evidence of "ancient astronauts" on Earth, the moon or other "nearby" planetary surfaces; searching for present day alien spaceships (UFOs) skipping through our atmosphere and/or solar system; discovering evidence of planetary engineering or modification (deliberate or accidental) in our own system of an artificial nature. Is the moon hollow; is the asteroid belt the remains of a 10th planet destroyed by interplanetary warfare; etc.

What SETI usually means however is searching beyond the realm of interplanetary space and out into interstellar space for such technological manifestations as unusual (and probably artificial) optical, infra-red (Dyson spheres), ultra-violet, radio, (or other regions of the electro-magnetic spectrum) signatures.

SETI buffs use highly sophisticated astronomical techniques to search the stars (those with suspected accompaning planetary systems), even entire galaxies as well as the interstellar medium for such artificial signs. The major emphasis over the past twenty years has been well and truly in searching for artificial extra-solar signals (or phenomena) in the radio division of the electro-magnetic spectrum. The reasons for concentrating on radio frequency (or wavelengths) are many and varied but it boils down to the fact that radio waves provide maximum information at maximum velocity (the speed of light) with minimum energy expenditure and minimum absorption (both in the interstellar and atmospheric mediums). Radio astronomers in Canada, the United States and Russia have (to date) conducted such searches (often on the side of "normal" astrophysical projects), though (to date) with no artificial signals of an unquestionable nature discovered. However, it must be understood that SETI makes the old problem of discovering a "needle in a haystack" seem downright easy. It could easily take decades of full-time searching before a signal is received, or we conclude that we are using the wrong approach, or we decide that maybe we are alone after all! Then again, a positive signal could come tomorrow!

Though SETI will answer the question of mankind's uniqueness in the universe, should a signal, or artifact, or spacecraft be detected, mear detection of ETI would never be enough to really satisfy our quest. We would desire communication with the ETI, otherwise known in the trade as CETI, either face to face, or at a distance. The problem is SETI, hence CETI!

The basic obstacle to face-to-face CETI is a reoccuring one that has hampered yet challenged man ever since he evolved the intelligence to realise that he was challenged - the twin plagues of time and distance. Always in the past the magic worked by money and technology under the direction of far-sighted men have to one degree pr another rendered the problems of communications imposed by time and distance down to dimensions that can be accepted by humans, as, at worst, nothing more than minor inconviences. From foot, to the horse, to sail, hence upwards to steam and the internal (some say infernal) combustion engine, hence increasing to jet power and the rockets to the moon, hence tomorrow, nuclear propulsion to the planets, man has shrunk the Earth down to manageable size and is working on the solar system. But what of the stars, and just who, or what, is waiting out there for us?

The fact that the stars are orders of magnitude greater in terms of time and distance (and energy and cost) to reach in person (whether "us-to-them" or "them-to-us), suggests that CETI will not be "face-to-face" (at least initially) but rather "at-a-distance" barring an unexpected visitation from an alien interstellar spaceship. To the best of our knowledge, the only way of CETI "at-a distance" is to use radio waves, and radio astronomers suspect aliens to think the same way and have conducted their searches accordingly. Thus, and again barring the unexpected, the next several dozen, maybe hundreds of, human generations will have to be content to SETI, hence CETI with ETI "at-a-distance".

Of course there are problems to be considered in working out any interstellar dialogue; the best methodology to use. But these will be no barrier to at least trying to discover the existance of alien life forms with a radio communications technology. Just because maybe there is nobody out there; because we don't really know where to look or what to look for exactly; because it would be easier to sit back and wait for "Them" to find us if "They" do exist; because the distances are measured in units beyond the comprehension of man; because the time, even for radio waves, to cross those distances is as vast as space itself; because all the money, technology and brain power may fail us this time, doesn't mean we shouldn't try to detect, hence communicate, with our own kind out among the stars - not necessarily our own kind physically or chemically, but our own kind in mind. We seek those who look into their alien skies at our sun and wonder what is looking back their way. The author is among those who would not want to disappoint "Them" by having our civilisation look the other way! But, first things first.

Are "They" out there? Are "They" intelligent? Can "They" communicate in ways we can detect, understand and reply to? Let's fix the problem by defining it as "how many communicating, technological, intelligent, civilisations are out there, but within our own Milky Way Galaxy, RIGHT NOW"? This isn't the same as asking how many alien life forms, even intelligent life forms are out there, for in the here and now, if we are to detect them, hence communicate with them, "they" must have a technology which includes the ability, and desire, to <u>use</u> that technology to communicate with us. Alien beings with telepathic powers and abilities probably wouldn't ever even concieve of using radio for communication for example. Their communications technology must be on a par, and along the same lines, as ours!

Anyway, exobiologists have invented a formula to assist in placing boundaries around what amounts to a statistical game of guesstimation. It is, with minor modifications by myself:

$$N=R_* f_s n_p n_e f_l f_i f_c L \qquad \text{where:}$$

N is the number of alien civilisations in our Milky Way Galaxy with a communications ability and desire comparable and compatable with ours.

$R_*$ is the rate of star formation per year in the Milky Way Galaxy. The accepted figure is roughly 10 stars per year (10/year) over the lifetime of the Galaxy.

$f_s$ is the fraction of formed stars that are considered suitable as being reasonable stellar environments around which an ETI civilisation could evolve and thrive. That is, stars which are on the main sequence, with long life expectations (not too massive), stable in energy output over billions of years (non-variable), single (non-multiple), with a planetary system. In short, we are looking for stars very much like our own sun (stellar type G) or slightly to either side of it. Therefore, stellar types F, G and K are prime candidates. A probable figure for $f_s$ would be 3/10ths.

$n_p$ is the number of good sized abodes (planets and moons of diameter greater than 3,000 km) around each suitable star. Using our solar system as an acceptable and reasonable average, $n_p$ equals 16 (9 planets plus 7 moons). The 7 moons are: Earth's Luna (3,480 km); Jupiter's Io (3,660 km), Europa (3,100 km), Ganymede (5,270 km), and Callisto (5,000 km); Saturn's Titan (5,830 km); Neptune's Triton (6,000 km). The smallest planet, Mercury, is 4,880 km in diameter for sake of comparison.

$n_e$ is the number of suitable environments for life to originate and evolve on. Of the 16 major abodes in the solar system, 5 are either currently, or speculated upon as being, suitable for life forms, based on our understanding of the origin and adaptability of life-as-we-know-it. These abodes are the Earth, Mars, Jupiter, Saturn and Titan. Thus, 5/16ths is as good an estimate as any for $n_e$.

$f_l$ is the fraction of "suitable" abodes that actually give rise to life forms. Since our current state of knowledge, subject to change, places only Earth as having life, 1/5ths is the only reasonable figure that $f_l$ can represent.

$f_i$ is the fraction of life bearing planets/moons that evolve intelligence. On Earth we have two such groups, the Primates (monkeys, apes and man) and the Cetaceans (whales, dolphins and porpoises). Given two independent evolutions of intelligence on one planet, and belief that intelligence would be a trait selected for as part and parcel of Darwinian evolution, the figure of unity (1) is often given for $f_i$.

$f_c$ is the fraction of intelligences that develop a communications technology. Though both the primates and the Cetaceans have intra-species communication, only one group has had the suitable environment, and has gone on to achieve technological capabilities for inter-species dialog (man - alien; man - ape; man - dolphin etc.) - the Primates, in particular man. The figure for $f_c$ is 1/2.

Notice how as one progresses from left to right in the string of right-hand variables, one goes from "accepted" to "probable" to "reasonable and acceptable" to "estimate" to "belief". This is an accurate reflection on our current state of knowledge of those factors which must place a limit upon our CETI quest. As our knowledge of those factors increase, our estimates of the number of ETI civilisations will go up or down accordingly. However, there is one factor which will always remain highly uncertain, at least in the near future or until CETI is achieved.

The "L" factor.

L is the final factor in the CETI equation. It represents the average lifespan of technological communications ability and desire. And L is the fly in the CETI soup. Why? Let's plug in the numbers arrived at thus far into the CETI equation. Recall:

$$N=R_*(10/\text{year})f_s(3/10)n_p(16)n_e(5/16)f_l(1/5)f_i(1)f_c(1/2)L(\text{years})$$

$$N=3/2\ L \text{ (or) } 1.3\ L$$

If the average L is very large (say 1,000,000 years), communicating civilisations our equals or better will be numerous. If average L is small (100 years or less), we could just as well and truly consider ourselves alone in the universe from the standpoint of interstellar dialog. Not that it makes any difference whether we are interested in CETI or SETI via the detection of artificial extra-solar radio waves as we would be under no obligation to attempt dialog once detection was accomplished. We would still be alone, or else communicating technologies would be so few and far between, hence thinly scattered among the stars that, on average, even the nearest communicating neighbor would be tens of thousands of light years away. At that distance, even speed of light communications becomes a bit of a joke! Who wants to wait 50,000 years between a "hello, how are you" and a "hi there, I'm fine, how are you?"

So, what is L?

First off, L is not the lifespan of the intelligence or even the civilisation, only the technological communications part of it. However, if L is sufficiently large, the three maybe for all practical purposes the same. For example, human intelligence, on a par with our current capacity, has been in existance for around 100,000 years, human civilisation, as we understand and define it, for 5,000 years and communications technology less than 100 years (and in terms of CETI only 30). However, if mankind maintains all three for another million years (a short time on a cosmic, even geologic scale), the three will be pretty much identical. Therefore, if L is large, let the lifetime of communications technology equal the lifespan of the generating intelligence behind it. If L is small, only the communications part will be relevant. By "large" and "small" I mean greater, or less than 100,000 years duration respectfully.

Probably the greatest reason for the postulation of a short L in our case (and we can only use ourselves as a guide in this area) would be because of:
1) our doing ourselves in through nuclear war, global pollution and general environmental damage, population growth and resulting pressures or a combination of these, either to extinction or to the destruction of our technology. The latter is also possible, but unlikely, through social change, or via the global depletion of our energy and/ or natural resources.
2) An act of God such as world-wide plague, the sun going nova, an earth-asteroid collision, dramatic climatic changes or via dozens of other science fictional doomsday plots.
3) Our communications ways and means undergoes drastic chances, such as communications via ESP, or gravity waves, or entirely via cable. In the latter case, there would be no radio leakage from Earth for other aliens to detect, hence serve as an incentive for them to contact us.
4) We lose interest in SETI and CETI. I personally don't see choices 3 & 4 as being slightly probable. So, looking in more details at option 1 & 2 - doomsday by an act of man and by an act of God as reasons for a short L...

As long as mankind confines himself to the Earth in particular, but even the solar system, he trusts his L not only to his own good intentions, but to Fate as well. What percentage of technological civilisations die in a CETI sense to their good intentions, technology and/or Fate while their L is still small we can only surmise. It probably falls somewhere between 1 and 99%!

There appears to be only one sure-fire methodology of removing any and all doomsday plots, except the end of the entire universe itself, whether an act of man or an act of God, and <u>insuring</u> a lengthy L. And that is through space colonization and interstellar migration, which doesn't of necessity mean colonization of extra-solar planetary surfaces - colonies existing in space around alien suns would do as well. Through the scattering of mankind through interstellar, even intergalactic space, his collective L has the potential to become as infinite as that of the living universe itself. Immortality, or as close to it as can ever be achieved, is the fate, not of man, but of mankind. No single (or even collective) doomsday can then wipe him out. To survive; to strive for a long L, man must become a galactic cancer, spreading himself far and wide throughout the cosmos. That strategy, long adopted by Earth's life forms, is termed <u>survival!</u>

And survival is such a powerful motivative force that I believe that strategy of interstellar space colonization would have been adopted by many extra-solar civilisations that survived to that stage of their development and technological ability - a stage we are at now in terms of solar system colonization (through interplanetary space colonies and in some cases (the moon, maybe Mars, the moons of Jupiter & Saturn etc.) planetary colonies) and should reach in terms of interstellar colonization in another 100 to 1000 years of technological evolution. Even if only one extra-solar civilisation adopted and achieved this strategy, its collective L should be very large. One such civilisation, scattered among the stars, easily equals hundreds of other communicating "stay-at-home" short-L civilisations in terms of CETI. And since it takes two to communicate...
The prospects or potential for a lengthy L for mankind, which would increase the prospects for CETI sooner or later, are far greater by going out into interstellar space than by staying put on Planet Earth or even saturating the solar syatem with his presence (though that in itself would go a long way towards relieving

man of the threat of many doomsday possibilities).

In conclusion, the ability to achieve a lengthy L is real; the motivation powerful. Thus, I believe in the cosmic scheme of things, average L is large, thus communicating civilisations are abundant.
The implications for SETI, hence CETI, are obvious.

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Other Suns, Other Earths? by David Seargent.

If space exploration has taught us anything at all, it is surely that life is confined to relatively earth-like planets. Even Mars, the planet most leke earth, is almost certainly devoid of life, and the other worlds considered possibilities (Jupiter and Titan) are looking increasingly less likely prospects, although Titan still remains a possibility (at least until after November's Voyager!).
There are two conclusions which seem to follow from this, viz. whether the universe is full of life or not depends upon whether earth-like planets are common or not and, if other inhabited planets are found, they may well be sufficiently earth-like to be colonized by humans (and conversely, earth may be suitable for colonization by most aliens).

At present, we cannot tell whether terrestrial planets orbit other stars or not, but (if all goes well) we may be able to have an answer to this question before the end of this century. It is possible that, by this date, powerful space telescopes capable of detecting the slight perturbations in the proper motion of nearby stars, produced by the gravitational action of planets as small as the earth, may be in use. If such slight perturbations are detected, it should be possible to determine the orbit and mass of the planet, and its distance from the primary star. This information will, in turn, enable astronomers to determine whether the planet is likely to lie within the star's life zone and, therefore, whether it is a likely candidate for life.

If such a world is found, exobiology must certainly receive a boost. If one is not, it will start to look as if the Solar System, and hence life, is something of a cosmic freak. Either way, it will be vital research for the subject of extraterrestrial life.

If a suitable planet is found, some day a high-speed probe may be sent to investigate its biological potential. If it finds an active biosphere, is it not possible that a manned ship will eventually follow - perhaps to remain on the new world? Is colonization of other worlds possible within the next couple of centuries?

This may sound unlikely to us now, but we must remember that a Mars probe would have received more scorn than interest only fifty years ago. Who can say what the future holds? Who can say, also, that some other intelligent race has not beaten us to the post, so to speak, and discovered that a certain yellow dwarf star in the outer regions of the galaxy behaves as if it has a planet orbiting within its life zone? Is an alien probe already on its way toward earth?

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Message from the American Centre for UFO Studies to the U.S. Government.

The following was released on September 5, 1980 at 2:00 p.m. at a News Conference in the East Lounge, National Press Club, Washington D.C. by the AMERICAN Centre for UFO Studies:

"The FUND FOR UFO RESEARCH in conjunction with the Centre for UFO Studies is calling for the U.S. Government to cooperate with civilian UFO researchers by turning over military reports and by allowing former Government employees to relate their experiences without fear of prosecution. The Government should turn over new UFO reports to scientific research groups such as the CENTRE after appropriate release procedures are carried out. Such release procedures would relate to the protection of vital U.S. military secrets. The government

has consistently stated that UFOs are not a threat to the security of the United States, therefore there is no reason not to release reports of UFOs made by military and other Governmental personnel."

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ACUFOS BIBLIOGRAPHY SERVICE: Life in the Solar System - Mars (part 1 pre-viking)

by John Prytz.

Compiler's Note: The planet Mars, while fascinating in its own right, has captured the imagination of the public (scientific and laymen alike) mainly because of the potential it holds for life. The first part of this two part bibliography on the topic of "life on Mars" will be on selected journal articles and books from the pre-Viking area, which of course does cover the Mariner 4, 6, 7 and 9 space probes to the red planet, or up to and including 1975. This will be followed next issue by part two which will cover selected journal articles and books from the post-Viking era (1976+). Many books and articles deal primarily with planetary astronomy, Mars in general, exobiology, and ufology also discuss the question of "life on Mars", but these won't be included due to lack of space and amount of repetition given the data base presented.


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UFO Reports From Around Australia.

Note: Things seem to still be unusually quite as far as UFO reports are concerned, and we only have one reports to list this issue.

QB80012 1945 Babinda 26-4-80 UFO Research (FNQ) CE1

Mr. S. and his brothers noticed an object to the west, hovering about ½ mile away The object was oval in shape with 'curved' "wings" on each side, was silver in colour which dimmed and brightened as the object retreated & returned.There also seemed to be a humming sound. Over about 1 hour,the object moved from a stationary position to the west and then returned to its original position. While stationary, the object also seemed to 'play' a yellowish/white beam over the ground. Finally the object disappeared over the mountains to the west.