



September 1966



July-September 1973



Keeping the Memory Alive

Vol 14 September 2016

THE TRACKERS' CROCNICLE

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Terence (Terry) Kierans - Editor
 CRO Trackers
 PO Box 93
 QUINNS ROCKS WA 6030
 AUSTRALIA

Tel: 61 8 9304 6983
 Mobile: 0414 25 1091
 email: tk@crotrak.com
<http://www.crotrak.com>



NASA and the Omega Speedmaster ctd.

From the now defunct website "clubspeedmaster.com", and an essay by Alan A. Nelson, M.O. [C.O.].

1978 Test Program ctd.

This included...

- Vacuum
- Low temperature
- Pressure
- Vibration
- Acceleration
- Salt-fog
- Humidity
- Shock testing

Responses to the NASA procurement requests were received from the Bulova Watch Company and the Omega Watch Company in Bienne, Switzerland. Bulova submitted a proposal offering one type of chronograph, sold to NASA for \$1 each. Omega submitted three proposals for three separate models.

The chronograph determined to be in compliance with the environmental requirements, achieving the highest technical score, and offered at the lowest price would be purchased.

The technical evaluation team determined that, of the chronographs submitted by Bulova for space flight environmental testing, no single watch was exposed to all environmental tests. Also, one watch failed in salt-fog testing and all three watches exposed to vacuum testing failed to show adequate sealing. Accordingly, the Bulova chronographs were determined to be in non-compliance with the specified environmental requirements.



Photograph - Ulloj Lotzmann

Once again, the Omega chronograph was superior to the other chronographs tested. The Speedmaster Professional met all environmental requirements, had the highest technical score, and was offered at the lowest price. Therefore, the Omega was accepted for procurement. It is significant to note that this was the identical model which had been submitted in 1962. The watch was offered to NASA at the cost of \$0.01 per watch.

In April 1981, STS-1, the first shuttle mission, was launched with Commander John Young wearing the Speedmaster Professional.

To be continued

Whereabouts?

As a result of Paul Dench supplying his "staffing list", augmented courtesy the late Brian Milne, the "Whereabouts" table of those for whom we have no contact details has expanded to more than one page. Thanks to those who have sent updates.

C Abott	Cheryl? Dixon	Vera Kastropil
Eric Ainsworth	L Donkin	John Keane
Gay Albon	John Draper	Mike Keen
Bill Arbery	Mike Dresser	Jim Keenan
Allan Barber	Bruce Duff	John Kelman
John (Allan) Barber	I Dunleavy	Gloria Klarie
Matt Barber	Dave Elliot	Roy Mallinson
Keith Barnard	J Erickson	Bob Marr
Barrow	Ian Few	Keith Mathieson
Deidre Beaumont	Ian Findlay	Alec Matthews
Elizabeth Beckett	G Francis	K McCarson
Keith Beveridge	Ben Franklin	Ian McDonald
Michael Billings	David Froom	S McDonald
G Bond	Jamie Gardiner	Frank McGregor
S Boyce	L Gardner	Eileen McLaughlan
Bill Boyle	S Garner	Don McLellan
B Bradley	G Carrick	Nola Meiklejohn (O'Byrne)
Phil Brindley	C George	R Miller
Hans Britz	Joe George	Ray Mills
Dave Brooks	Richard Govern	Marilyn Milner (Gobby)
T.F.A Brown	Brian Gray	Sharon Morgan (Todd)
W Brown	Ann Green	J Murray
J Burdett	Terry Haggett	Dennis Naylor
R Burdett	Peter Hardwicke	Gloria Neal
Robert Burns	Ron Harmes	Ellie Nichols
Joy Cameron	Anne Harvey (Brookes)	K Elton Nickerson
Geoff Cardwell	D Hatch	Graham Nielsen
John Cawthrey	Gail Heileman	John Noble
Brian Clifford	Ernie Hindley	? O'Brien
Keith Clifton-James	Dave Hine	Joan Oats
Barbara Cobcroft	A Holgate	W Oliver
Jim Crossland	Phyllis Hook (Watson)	Denis Owens
Noel Cunningham	J Hopkins	John Paddon
F Dawes	Deidre Howard	Diane Pitman (Housley)
Andrew Dempster	B Hughes	John Platten
Jean DeVis	Ed Humphreys	D Powell
Marilyn Dick	B Hunter	M.J.K Power
Olive Dick	D Hutchins	Wendy Puccinelli
Neville Dippell	Ian Jones	Lorna Quinn

The quest continues; the list has got a bit shorter, thanks to George Allen; Sue van Dongen et al. I have been given information concerning the possible whereabouts of a few of these, but so far have not been successful in obtaining, or confirming, details. The last Reunion Dinner brought out some missing persons, but there are also a few who do not wish to be contacted.

Whereabouts? ctd.

Roger Ramsden	George Sefton-Bellion	Christine Thomas
A Rees	D Selby	Howard Thomas
Dave Rendell	Ron Shand	Jack Thompson
Frank Rice	Fred Sharland	Patsy Thompson (Nolan)
Doug Richards	? Sheehan	Larry Tomkins
D Richardson	Jeff Shuttleworth	Frank Toomey
Harry Richmond	Ray Skender	Mike Travell
Ralp Richmond	Lyn Smart (Willis)	Ernst Uhl
Dave Rickards	J Smith	Tony Vingerhoets
G Riley	George Small	Dave Walker
Brian Robinson	P Smith	Tom Ward
Lynne Rosser	Roger Smith	Mrs B Ward
Ted Rosser	Dave Standbury	N Wardle
Lindsay Sage	John Stanton	A Watermeyer
Stewart Sands	Bill Smythe	Irene West
Ron Sargeant	Hazel Snook (Howse)	Bernie Wilbourne
Bob Scott	Barbara Stephenson (Vernon)	Glen Williamson
Lorraine Scott-Malcolm (Erlandsen)	Barbara Teahan	Garnet Wilmott
Michael Scott-Malcolm	Barbara Teasdale	Brian Wilson
Russell Schwarzer	Des Terrill	Ray Zatorski
Dorcas Sefton-Bellion		

LOS



Brian aboard one of his catamarans

I deeply regret having to advise that Brian Milne passed away on 13th July 2016.

Brian became the third Maintenance and Operations Supervisor (M&O) after Wes Oke and Dick Simons. He then became the first Operations Supervisor (Ops) when the complexity of Apollo missions necessitated a sharing of mission duties with the M&O.

Outside of his Tracking Station duties Brian's passion was being a "Tracker sailor", racing his 8.5m catamaran, followed by an 11.6m catamaran; both of which he built.

Toward the end of the Tracking Station days Brian became the Company Senior representative, and was the one who locked the gates when the last five employees finally left.

He is survived by his five children, ten grandchildren and two great grandchildren.

From A Carnarvon Viewpoint - ctd.

Gemini IV

America's first EVA

4 - 8 June 1965 AEST

By Hamish Lindsay

Flight Director Gene Kranz went into overdrive and worked his normal day preparing for the mission, but in the evening he returned to work in secret on the EVA procedures. Kranz planned to have the hardware qualified and procedures for the EVA ready fourteen days before the launch.

The remote tracking station Capcoms were given double-sealed envelopes and told to only open them on instructions from Flight Director Gene Kranz. If no instruction was issued, the envelopes were to be returned unopened. Inside was another envelope marked Plan X detailing procedures for an EVA. It wasn't until the final week of training, on 25 May 1965, that the message from HQ arrived, "*We are GO for EVA*", and the media were informed.

The crew.

The crew for Gemini IV was announced on 27 July 1964. Command Pilot James McDivitt and Pilot Edward White had known each other since their college days and had been in the same class at the Air Force Test School. Backup crew Frank Borman and James Lovell, both 36, first met when undergoing testing by NASA. All four were second generation astronauts, selected by NASA in September 1962.

James Alton McDivitt, aged 35 for the mission, was born in Chicago, Illinois, on 10 June 1929 and went to school in Kalamazoo, Michigan. He received his BSc. in aeronautical engineering from the University of Michigan (first in class) in 1959, and an Honorary Doctorate in Astronautical Science from the same University in 1965.

He joined the Air Force in 1951, fighting in the Korean War, and retired with the rank of Brigadier-General when he retired from NASA in June 1972. He logged more than 5,000 flying hours. He joined NASA in the second intake in September 1962, and this was his first space flight.

He commanded the Apollo 9 Earth orbiting mission, and was Program Manager for Apollo 12 through 16.

He regards his highlight in space was getting Apollo 13 home safely.



Edward Higgins White II, aged 34, was born in San Antonio, Texas, on 14 November 1930. In 1952 he earned his BSc. at the US Military Academy at West Point. He attended the Air Force Test Pilot School at Edwards Air Force Base, California in 1959 and later was assigned to the Wright-Patterson Air Force as an experimental test pilot. White logged more than 3,000 hours flying, 2,200 in jets. He joined NASA in September 1962 in the second intake of astronauts.



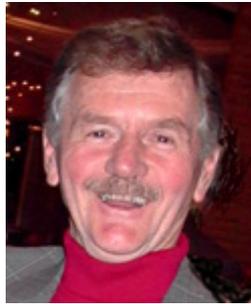
White was ideal for the first American attempt to walk in space; a fitness fanatic and superb athlete, he just missed out on the US team for the 400 metre Olympic hurdles by 0.4 of a second. He died in the tragic Apollo 1 fire on 27 January 1967.

To be continued

CROing about Carnarvon

A personal reminiscence by John Ford.

Of course, the more coastal Brand Highway would not be open for years yet. I was interested to see the country changing; the farming land giving way to the familiar red dirt, saltbush, and scrub that I knew from the inland.



My saviours came along in the form of a young couple heading north for a holiday in their hot Cortina.

We bored up the highway for hours at what to me seemed a terrifying speed, heedless of stray sheep, emus, and cattle; often airborne for seconds at a time as we howled and thumped over the cattle grids. There was no question of sharing the driving, no more chance this guy would hand over his Cortina than he would his girl.

Eventually I became fatalistic, and settled back to enjoy the wild ride - I even dozed a little as the summer evening turned to dusk. At about 8:00pm we finally swept around a bend and saw an amazing array of lights ahead. Most were red, and they were spread over a wide area and at various heights- some mounted on towers of some sort, others on futuristic radar-like dishes pointing dramatically out towards space.

"Jeez- *what's this?*" cried our youthful Fangio, actually slowing slightly to take it all in. "*Um- I suppose it's the tracking station. It's bound to be around here somewhere*", said I nonchalantly, not sure, but knowing that it was certainly not going to be Carnarvon airport.

"That's where you're gonna work? Jeez- it's like something from James Bond! Cool!"

I had told them I was hopeful of a job, preferably at the Carnarvon NASA station. There was a stunned silence as we hurtled on towards the impressive display. In truth, I was more in awe of this galaxy of lights than they were - I hoped to enter those stern portals



Photograph - Tom Sheehan

now whizzing past, and to become a part of it all, for a couple of years at least.

I had no idea what to expect. Would it be overbearing, militaristic? I had been in the Navy and had seen enough of that. What Dr Strangelove-like delusions might thrive in such a place? It was owned by the Yanks, after all, and my experience of them so far had been interesting but not totally satisfactory.

I recalled an evening at the Subic Bay EM club in the Philippines a few years earlier: a party of us had fallen in with some US sailors and marines, and had been invited back to their base. One minute we were cordially lounging around the lawns drinking San Miguels, and the next the air was thick with flying bottles and violent fists, punctuated by angry shouts, the most polite of which were "*Leatherneck*" and "*Swabbie*".

To be continued

Extracts from "Recollections From My Years At Carnarvon"

David Johns

Living Conditions ctd.

Very few of the trackers had nice gardens or planted anything for the future. They tended to put most of their spare time into their recreational interests.

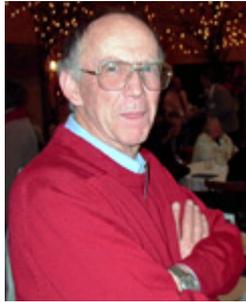
The party goers tended to have more parties, the fishy people did more fishing and the drinkers did more drinking. My interests were in touring the country and when I had spare time, I liked to put my kayak on top of my car and go off looking for places to kayak. Sometimes I would go with friends, and sometimes I had time off when others were working so I would go alone.

Technology Shock

NASA had good communication links to all parts of the world and it was possible, when there was a need, for Carnarvon staff to talk to staff on any of the other tracking stations. The communication links were known as "nets" or the "scama 'phone" (SCAMA was an acronym for Station Conferencing and Monitoring Arrangement) and anyone with a valid reason could turn on the net and have conversations with other stations. It was possible to hear people from multiple sites.

The discussions were usually technical and full of jargon and acronyms and not very meaningful unless you had a working knowledge of what was being discussed. At that stage of my life, I had only ever made one hurried overseas telephone call and I thought that was a big deal — in those days, overseas calls were complicated to arrange, expensive and not a common consumer item.

In July 1969, Apollo 11 had gone to the moon and been a huge success and it



was followed by Apollo 12 in November 1969, which was likewise a success. In April 1970, there was an explosion in an oxygen tank on Apollo 13 and for several days it was touch and go whether the crew would get back to Earth alive.

I arrived at Carnarvon about a month before Apollo 14 was due to go to the moon. NASA was anxious that, as much as possible, there be no problems with Apollo 14.

One day, only a few weeks after I arrived in Carnarvon, I was doing my work at SPAN and I could hear discussion on the net and I did not take much notice and then I realised I was hearing a conference discussion between the Operations Managers at about ten different sites, all around the world, all discussing procedures and readiness for Apollo 14.

It was task focused but quite informal as they all participated and discussed various scenarios and it went on for about 40 minutes.

I was gob smacked that so many people from different parts of the world could just have a discussion like as though they were all in one room.

These days, we can watch real time replays of a tennis serve at Wimbledon, or a replay of a missile exploding in Iraq, and think nothing of it but back in 1970 the existence of that technology was very new to me and impressed me greatly.

Another piece of technology that blew me away was that I think SPAN had the first ever facsimile machine in Australia, though that name was not around at the time.

At SPAN, we had the capability to take a photo of the sun, develop the film and make a black and white print all within about 10 minutes, which was by the standards of the time very fast.

To be continued

Apollo: Where Are They Now?

Thanks to Tony Sala for providing this. One of his hobbies is to see as many as he can, first-hand.

The Apollo Command Module Capsules are on display at various sites throughout the U.S. and the world.

Some of the Apollo Lunar Modules were deliberately targeted to impact the Moon to provide artificial moon-quake sources for seismic experiments. The list below gives the locations of these displays, and impacts where applicable; plus links to NASA's *Master Catalog* for descriptions and details of the missions (for those of you reading the pdf version of these newsletters).

[Apollo 16](#)

Command Module "Casper"
U.S. Space and Rocket Center, Huntsville, Alabama

Lunar Module "Orion"
Released 24 April 1972, loss of attitude control made targeted impact impossible.
Impact site unknown

[Apollo 17](#)

NASA Johnson Space Center, Houston, Texas *

Lunar Module "Challenger"
Impacted Moon 15 December 1972 at 06:50:20.8 UT (1:50 AM EST)
19.96 N, 30.50 E

[Apollo-Soyuz](#)

Command Module
California Science Center, Los Angeles, California

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### [Skylab 2 / Crew 1](#)

Command Module  
Naval Aviation Museum, Pensacola, Florida

### [Skylab 3 / Crew 2](#)

Command Module  
NASA Visitor Center at Great Lakes Science Center,  
Cleveland, Ohio

### [Skylab 4 / Crew 3](#)

Command Module  
National Air and Space Museum, Washington, D.C. \*

\* Visited by Tony Sala

*To be continued*

## ACROBITS '73

### MY JOURNEY TO AUSTRALIA (ctd.)

by D.A. Pettinger, U.S.B.

All of us thought that the atmosphere might be a bit more friendly at Los Angeles, but we started to have our doubts as we were once again issued with Customs Declarations, etc. After landing, a similar grim procedure awaited us but this time the personal search was omitted.

The usual stern faced cops eyed us suspiciously as we hurried about, clutching our belongings. Once again we were escorted to a horrid little lounge with no refreshment facilities. To add to our confusion, the time had of course changed twice already since leaving London.



The next stage of our journey took us to Honolulu. This time we were informed by a cheerful Stewardess we were to be spared Customs Declarations and would be able to remain on board the aircraft. Thank heaven for small mercies, muttered a few of the blank faced passengers.

Due to time changes, it was still dark as we sped towards Honolulu and many of us slept for the first time. We eventually arrived at Honolulu and stayed on board while the refuelling was being done. The new crew arrived and we prepared to set off on the next stage of our long journey to Australia.

The next stage was in fact to Fiji. When we took off from Honolulu it was still dark but during the flight to Fiji we watched the dawn come up. At 35,000 feet, way up above the clouds, the sunrise is a beautiful sight to behold, the colours are rich and magnificent. For those of us who had been striving to keep up with the time changes, we were all incorrect by the time we reached Fiji, also we had the wrong day. As you will have realised we had crossed the International Date Line and lost a day.



Fiji was very hot and humid as we stepped out of the aircraft into the bright sunlight. This was in fact the first real sunshine some of us "Ten Pound Poms" had ever seen in our lives. For an international terminal, Nadi is surprisingly small. Once again our stay was brief but at least we had the advantage of daylight this time and out came the inevitable cameras.

The final stage of our journey was from Fiji to Sydney; at long last we had arrived in Australia. Strange to relate, when I set foot out of the aircraft and descended the stairs to set foot on "Aussie" soil for the first time it was pouring with rain.

I then had trouble with my luggage; one item had been lost. For one awful moment I had visions of it being left in some other country we had just visited. But mercifully, it was located and I heaved a sigh of relief.

*To be continued*

## Memories of the Opening of

*By the Editor*



Just outside the old Comms room we came across an emu bush in full bloom, thus demonstrating that there is still life among the remains.

After a mooch around, and souveniring a tile from the old entrance steps we made our way to the Stadan site.

During the course of the inevitable photographs we were interrupted by a telephone call from Joan Lysaght informing us of Tom Lysaght's passing. That we got the call at that old site was a bit eery to say the least.



Teeny B. on Stadan antenna mount



We didn't make it to the old FPQ6 site on this occasion, but Trevor Housley did; as shown by this

photograph.

Full of memories, we left the site. We decided to stock up with snacks and drinks before returning to Kathy and TB's room at the motel to enjoy a relaxing afternoon.

A telephone call later let me know that a copy of "*Carnarvon and Apollo*", signed by Paul and Alison would be on the morning flight from Perth. Jim, Alison Greg and I had planned some time ago for me to present it to Captain Cernan,

As luck would have it the Friday flight from Perth was delayed, so we enjoyed what Carnarvon Airport lounge had to offer. Just as well that there were the three of us to keep company.

Lunch was courtesy of what we could get from Woolies before we once again returned to the motel to enjoy it, and later to be joined by John Preece.

The day was rounded off with a fish and chip supper for Kathy, TB and me, at the home of my host Sue van Dongen.

At last, Saturday dawned. During the early morning visit to the markets we bumped into Ken Watters and Chippy (our old Carnarvon taxi driver, now retired).

Evidently there was some confusion over the time for the Museum Phase Three opening as yesterday we had been told the time was to be advised; previous information from Phil Youd had said mid-day, much earlier in the year, and now the Tourist Centre was announcing 1 o'clock.

However, to be on the safe side we merry band of Trackers arranged to be on site in time for a noon opening.

On arrival at the Museum, around 11:30 am, there was no sign of life, and it wasn't until mid-day that the doors opened.

The staff there were not aware that a party of Trackers would be attending and wanted to treat us as visitors, paying an entrance fee. They were also completely ignorant of the scheduled start time.

Long story short, we grabbed the front row seats in the theatre and eventually the theatre gradually filled to overflowing accompanied by signs of organising the speakers area by the to-be MC, local identity John McCloy.

Coming up to 1:30 the side door opened and our illustrious guest, Captain Eugene Cernan, entered; accompanied by his long-term buddy Fred Baldwin, Dr Lisa Harvey-Smith, and of course, Phil Youd.

*To be continued*

## Nvidia sinks moon landing hoax using virtual light

*Courtesy CNET*

First, the moon's surface is comprised of what are essentially thousands of tiny mirrors -- moon dust if you will -- that bounce light back at a viewer. Yet that didn't account for the necessary level of brightness to light up Aldrin.

So Nvidia engineers began tinkering with different elements of the photograph until they discovered that it was not what was in the frame, but who was behind it. The famous shot was snapped by Neil Armstrong — who was off to the side of Aldrin in full view of the Sun — wearing a 85 percent reflective spacesuit that contained five layers of the highly reflective fabric Mylar blended with four layers of the flexible yet durable material Dacron on top of an additional two layers of heat resistant Kapton.

That kind of garment, Nvidia discovered, could bounce a ton of light. So they dropped in Armstrong, adjusted his suit's reflectivity and found that they were able to re-create the scene realistically.

Nvidia was also able to address another claim of moon landing conspiracists: the lack of stars in the sky. Because of the level of brightness on the moon, the astronauts were using cameras with smaller apertures, meaning less light was streaming in during the on-site photographing.

With a smaller aperture, the astronauts were able to avoid blowing out the photos' primary subject matter, the astronauts themselves and the reflective surface of the moon, but they removed the faraway light of the stars in the process.



Nvidia's re-creation of the Apollo 11 landing site, showing what a photograph would have looked like with a small aperture, meaning less light and thus no stars in the sky.

*Nvidia*

*To be continued*

# Keeping the Memory Alive

## KEEPING THE MEMORY ALIVE



### Carnarvon Tracking Station 1964 - 1975



Present Day

[Click for full size](#)

*Mick and Sue Coffey's Carnarvon Steel Supplies of Cornish St Carnarvon fabricated and donated the sign*

*Signwriting generously donated by W&K Painting of Egan St, Carnarvon*

*Photograph by Phil Youd - Edited by Terence Kierans*

[Click here to commence entry to the original station](#)

**M**y sincere thanks to all of those who have contributed to the website so far;  
listed at: [http://crotrak.com/thank\\_you.htm](http://crotrak.com/thank_you.htm) .

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