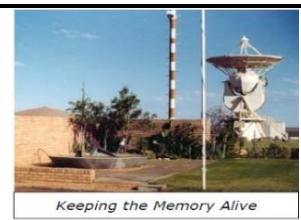




CROnICLE

JUNE 2021 - VOLUME 24



Note from the Editor

By Lauri Glocke

Hi Everyone

I trust all our CRO Trackers are keeping well, and I hope that those living in Victoria are not having to be in lockdown for too much longer!

Our thanks again to Paul Linnane for his contribution to our CROnicle with an interesting article on the biggest player in the private enterprise development of space technology, Elon Musk.

Once again I am in the process of getting ready for my road trip to spend 3 months in Carnarvon. While I am up there the Carnarvon Space and Technology Museum are getting ready for the next Space Festival – the official opening of Stage 4.

As this goes to print I do not have an official program but have put what details I have on the next page.

KEEP THE DATE FREE



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See the next page and

LOCK IN THE DATE

Hope to see you all there!

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Official opening of Phase Four

Full size Lunar Module display

This gala event will be a unique opportunity for you to celebrate the unveiling of Australia's only full-size Luna Module.

When: Saturday July 31

**Where: Carnarvon Space
& Technology Museum**

Time: From 7.30pm



Tickets \$29 available soon from the Carnarvon Visitor Centre

Among some of the special guests are:

Ed Fendell (via Zoom)

Ed Fendell was Head of the Communications Systems Section, Flight Control Division at the National Aeronautics and Space Administration's Johnson Space Center on July 20, 1969, when Apollo 11 landed on the Moon.

Professor Lyn Beazley

Professor Beasley was WA's Chief Scientist from 2006 to 2013, advising the State Government on science, innovation, and technology.

Finger food and bar available (eat at home first and NO BYO)

CRO Trackers Memoirs

Stories that were written by CRO Trackers for Paul Dench when he was collecting memoirs from the Carnarvon Trackers anticipating they may be used in his and Alison Gregg's book.

RIP Paul and Alison - sadly missed and always remembered by Carnarvon CROTrackers.

*** Note: These stories are uncorrected and are 'as written' by the author! Editor ***

Lloyd Brown – The first of a few memoirs

: Tuesday, March 16, 2004 12:52 PM

Please feel free to contact me ad liberandum. I'll rack my brains for more operational stuff but that was really Paul Oates' area. I do remember a group of scientists arriving there to use the FPQ6 radar to search for instellar sources of water vapour in the Southern Hemisphere sky. I found the lecture/briefing by the bloke conducting the experiment most interesting. They found two or three such sources as a result of their investigation.

On a personal note. I went to CRO as a temporary (six month) replacement for the Admin Officer who had been appointed from Darwin but whose advent was delayed by an appeal against his promotion. I applied for the (temporary) job because I was interested in the Dutch shipwrecks on the WA coast and thought I might get the opportunity to visit some of the sites.

To get to CRO from Brisbane where I was living at the time was the longest plane journey in Aust. At each city - Sydney, Adelaide, and Perth we had to claim and recheck all our luggage. Such trauma!! I loved Carnarvon on sight and loved it even more when the Sou Wester used to sing thru the wires. I did eventually organize a couple of trips to the Zuytdorp (1712) wreck site on the beautiful but remote coastline between Kalbarri and Steep Point at Shark Bay, in Brian Milne's landrover.

Terry Kierans, Ian Squires, and Jim Wilcox also went along. Magnificent scenery, with rock lobsters crawling around the reef ledges in broad daylight.

I found an ancient dingo trap along the track, which I brought back and put under Col Smith's desk on my first day back at work.. Col was so tickled by the prank that he had the trap restored. He retaliated by erecting a set of pawnbrokers balls outside the door to my office.

The real Admin Office was killed in a vehicle accident at Port Augusta on his way to CRO.

I was the man on the spot and Ray Jacomb was "not unhappy" with me (I tend to grow on people. First impressions are not my long suit) so I stayed and as I keep emphasizing loved every minute of it.

Do you remember flying in the old Dakotas - the DC3's?? I did it once or twice. What a drag. Another thing you ought to include is the (once only) landing and take off of the NASA Super Constellation at CRO airport. At the time it was the largest propellor driven aircraft in the world – 6 engines?? I think Strategic Air Command used to use them. Remember how the entire town turned out to see it take off?? It was touch and go - so hairy that they only attempted it because it was the last time the Super Constellation was used. The aircraft was used to calibrate the antennae - how I don't know, but I sure you do. It barely cleared the hill at the end of the runway. Got to hand it to those Yanks.



Super Constellation NASA 421 making a low pass over the Carnarvon Station at the end of the Apollo 17 slims, November 1972. Photo: Bob Burns.

Photo Courtesy of Alan Gilham's story (honeysucklecreek.net)

More of Lloyd's memoirs to come in the next edition!

EXTRACTS FROM
“RECOLLECTIONS FROM MY YEARS AT CARNARVON” – ctd.

BY DAVID JOHNS

***18An incredible but true story – Continued**

Bill's wife and daughter were distraught. A very serious situation had become twice as serious. By now Bill had been in the water an hour. How long could he last? The two women drove back to the Blows where there were some fishing shacks. A man there had a small boat but it was too small to go out into the ocean.

About twenty kilometres away there was a mine where Texada Co pumped brine out of the water table under Lake McLeod and evaporated the water in big bays. The resultant salt was exported by the ship load from Cape Couvier.

Texada employed about 60 people, most of whom lived in Carnarvon. Bill's wife and daughter drove to the mine to seek help. It was a Sunday and they were lucky to find anyone. A Texada employee was located and they told him they needed help. He used the radio to summon assistance and soon there were men coming from all directions, but what could they do? How could they get two people back across the rock shelf and onto dry land? They jumped in vehicles and headed back to the coast, hoping that Bill and his son in-law would still be alive. They were alive, but cold and fatiguing.

The men from the mine realised they needed a plan and some of them raced back to the mine to look for things that could help. They hatched a plan and scrounged up the equipment and headed back to the coast. One man dressed in several sets of overalls, put on heavy boots and put an inflated car tube around his waist. They also had a second inflated rubber tube, a big tube from a mining tuck.

Ropes were tied to both tubes and the large tube was placed on the cliff top where it was to be washed out by the next monster wave. The heavily clad man sat in the big tube, waiting for the ride of his life. By now more men were arriving from the mine and other places, all eager to help.

Normal sized waves were crashing on the rock shelf but once every five or ten minutes a monster wave would come right over the top of the cliff. When the right wave came, the men on the shore played out the ropes. The big tube and its passenger were washed out to where Bill and his son in-law were. They made a decision that Bill would hang onto the car tube and the men on the coast would pull it in on the next monster wave.

(To be Continued)

“AT WORK AND AT PLAY”

in Carnarvon Western Australia, from November 1965 to February 1972.

Snippets of Stories of Geoffrey and Lynette Broom (Dec'd)

Sent 28 Jun 2004

Hi Paul,

here is a bit more of the story from me:-

Reminiscences of The Yeti, 2.

Back to the recruitment stage for a moment - we three new recruits from England arrived in Dallas, Texas, and there met the Australian contingent, including our Fearsome Leader, who is now the author of this book. (Do I mean FearLess Leader - I can't remember now!!!). In the Australian contingent was one Monte Sala, our Italian friend, and he found an Italian restaurant near where we were staying in Dallas, and several of the team went with him for dinner there one evening. The waitress was quite pleasant (fortunately) so when she asked for my order I replied in a really thick Italian accent "I'd-a-like-a da- meeeneeeestroni-soup-a-please-a", during which performance poor Monte tried very hard to slide down his chair and disappear under the table. However, the waitress was not too put out and came back with something like "and would you like a thick ear with that?", so we all had a good laugh.

To Carnarvon now where we arrived in November 1965. The first spot of bother we had was discovering that we were sharing our houses with cockroaches, which made the ladies quite cross (mine and Leo's anyway), so we fronted up to the personnel officer and he organized fumigation for our houses, which got rid of the pests. All we had to do then was to watch that they did not come in in the bags of potatoes from the shop.

Our first Xmas at Carnarvon was the first ever hot Xmas for me, and we spent some of it sitting in the Gascoigne River at Ten Mile Bridge drinking Swan Lager trying to keep a bit cool, as the temperature had got to 43degC. That Xmas the river did flow, first time for 32 years (at Xmas) we were told. At home we looked at slides of English winter scenery to try and get the idea of Xmas, it just didn't seem the same in the mid summer heat.

In the first several months at the station we were helping to install the USB system, and we did things like putting the equipment cabinets in place and then connecting all the cables. The cables went from cabinet to cabinet in the space under the floor, and as we were laying under the floor lacing up the bundles of cables our Australian friend Ben told us to watch out that we didn't lace in a big black snake while we were at it!!! He wasn't entirely joking either as there were snakes around in the bush close to the station.

Some time after we got USB up and operational, and after there were ALSEP packages on the moon, an American engineer arrived at the station with intent to focus the main dish by tracking ALSEP high gain signals and making polar diagrams of the antenna's performance on an X-Y plotter hooked into the Servo Console, which was where I worked with our Australian friend Ben. At that time the crew was not on "fluctuating shift" status, but the American was boss and said we were going to do the job regardless, so we did - the moon just happened to be up all night, so we all worked all night and slept all day, which was fine with us technicians. Just out of interest, we got paid normal time for being at home in bed all day, and overtime for being at the station all night (which was fine with us technicians). During this work, which lasted about two weeks, Ben and I had to go outside, in the night which was quite cold, and go high up in a cherry picker to make adjustments to the antenna, doing this many times until the American engineer was satisfied with the focus of the antenna. While we were doing the outside adjustments our Fearless Leader Paul, the author of this book, led from the front by coming up in the cherry picker with us and helping to make the adjustments (as opposed to leading from the comfort and warmth of his office desk) and both Ben and I respected him greatly for doing that - not that we told him though!!!

At some time during the early days of USB (which we should explain stands for Unified S Band, not as most of today's kids know those letters - as Universal Serial Bus) our Fearless Leader became known as The Kalib, or even El Kalib on more formal occasions. There came an occasion when The Kalib went away from Carnarvon for a few days on a business trip, so while he was away his True and Trusted Team got their heads together to see what sort of diabolical caper we could get up to to welcome him back. The result was that someone acquired an old toilet seat without the lid and we fitted it to a drum so that it looked like the top end of a longdrop dunny. We then bolted it to a floor tile in front of his office desk, in just the right position to be sat on to work at the desk, and we also fixed the floor tile so that it was a major engineering effort to get it up again. We all watched with interest when The Kalib came back!!! But alas, he was not at all amused, he couldn't move it, and to make things worse he had an important visitor just hours after his return. If you get to read this part you will know that he has forgiven us - and anyway we only did it because we liked him, if we hadn't liked him I don't think we would have bothered.

One time we were preparing the USB system for use during a test or mission of some kind, and if we worked longer than five hours we were supposed to get paid a delayed meal break penalty, but the paymasters were reluctant to pay that. So, after five hours, all the USB guys walked out except me and I got caught by The Kalib, who by then was getting really worried about getting the pre-pass calibrations done. I therefore stayed to help him but only after he had agreed to the delayed mealbreak on my timesheet. We truly were a lot of very stropky young men in those days!!!!

There you have a few of my more interesting memories of the work side of things, Paul, so I will send them now (when Lynette has proof read them) and start a new page about the social side of life at Carnarvon.

Cheers for now, Geoff (The Yeti) and Lynn.

“CHIT CHAT” – From our Trackers

David Johns: Further to the response from Lloyd Browne on the question, does anyone know who “Bill” was? David Johns has been in touch and clarified things and has provided some other information regarding the story. David said he was 99 percent sure of his name but did have a slight doubt. He knew it was somewhere in the years 1971, 1972 or 1973 so he went to the National Library in Canberra and spent hours looking at microfilm of the Northern Times and found the articles to confirm it was Bill Day – I will add these articles to the next CROnicle with the rest of the story.

Speaking of Lloyd Browne, John Lambie sent an email relating to Lloyd’s story in the last CROnicle.



Dear Lloyd and Laurie

Just reading the CROnicle and found Lloyd’s article interesting, and the \$\$ contribution to the Fremantle Port Authority. But what were the mods required?

A tracking ship did port at Fremantle, at least once, it would have been during 1965. The Indian Ocean ship “Coastal Sentry”, and I went aboard. Quite uncanny as it had the identical equipment layout of the equipment for Gemini. The main difference was that movable test equipment, viz techtronic scopes, etc, and furniture, had chains attached to anchor I suspect in anticipation of rough weather.

Was there a second generation of tracking ships for Apollo? Not sure about them, and I had gone from CRO in 1967.

Cheers John Lambie

John Lambie sent me an email and asked me to direct anyone who is interested to the www.honeysucklecreek.net site where some of his stories (and Karin’s) have been added.

These make for interesting reading; I especially loved Karin’s story about her first flight to Carnarvon and how she dealt with the weather conditions when she stepped of the plane at the scheduled stopover at Gascoyne Junction. Thanks to Colin Mackellar for adding these stories to the Carnarvon tracking Station segment of the website.

A topic I was intending to put in the March edition was also from John Lambie, it was about the LOS of Dr. Brian J. O’Brien. Dr O’Brien was a space scientist whose career spanned the entire history of space exploration, he died in Australia on August 7, 2020, at the age of 86. His space instruments were carried on spacecraft ranging from the original Explorer missions to the lunar landings and his scientific contributions covered a period of more than 60 years.

John’s daughter, Roxanne, had a chance meeting in a dog park with a lady named Anne (surname unknown). In conversation it was revealed that Anne was handling the estate of the late Dr Brian O’Brien. Apparently, amongst his estate is a phial of moon dust and Anne was asking if the Carnarvon Space and Technology Museum would be interested in having it.

John said he will forward Roxanne’s email on to Colin Mackellar, Phil Youd, and myself. To date, as far as I am aware there has been no further contact about the phial of moondust. As John said, maybe others are seeking the Phial of genuine moon dust.

LOS - (Loss of Signal)

And this is the page we all don't want to read. It is with great sadness that we continue to need a page to acknowledge our CROTrackers who have passed.

I received the news just last week that William Chandler, known to everyone as Jeff, is another one of our Trackers who is a LOS. Condolences go from all trackers to his wife, family, and all his friends.

In the last edition I let you all know that Joe McGrade had passed away; since then, I recently received an email from Joe McGrade's, partner Kerry who said that Joe, sadly, had passed away in January 2021 after a long battle with cancer.

We also mourn the loss, at the age of 90, of Michael Collins who passed away on 28 April 2021. He will always be remembered as the astronaut who flew the Apollo 11 command module Columbia around the Moon in 1969 while his crewmates, Neil Armstrong and Buzz Aldrin, made the first crewed landing on the surface.

Deepest sympathy is extended to the family, colleagues, and friends of Michael Collins.

RIP Michael Collins



The Carnarvon Space and Technology Museum have dedicated the wall around the fountain to memorial plaques for CRO Trackers who have passed. They are stainless steel, and the cost is \$100.

If anyone is interested in commemorating their loved one with one of these plaques, please contact Phil Youd, Chairperson by email at phil@carnarvonmuseum.org.au



WHAT'S UP IN SPACE?

Paul Linnane (USB 1969-70)

TO INFINITY AND BEYOND – OR AT LEAST MARS

This article concentrates on the biggest player in the private enterprise development of space technology, Elon Musk.

Musk was born in Pretoria, South Africa, and moved to the USA to attend university where he completed degrees in physics and economics.

In 1995 he set up his first tech company, Zip2, which was sold four years later to Compaq Computers for \$300 million. Musk also co-founded X.com in 1999 and it was better known as PayPal when it was acquired by eBay in 2002. Musk's share was worth \$160 million, setting him up to personally invest in his long-forming dream of starting Space Exploration Technologies, or SpaceX. In 2003 he also founded Tesla, but that is another story.

Musk wanted to develop the capacity to transport cargo and humans into space and ultimately to Mars. To kickstart his space flight ambitions he looked at buying refurbished Russian ballistic missiles, but that proved to be too expensive and difficult to negotiate. He concluded it was easier for SpaceX to develop its own rocket that was low-cost and importantly, reusable. Over the next two years the *Falcon 1* rocket was developed.

SpaceX was not an overnight hit. After a numerous failures, *Falcon 1* was successfully launched into space in 2008. Later that year NASA announced SpaceX had been awarded a \$1.6 billion contract to fly supplies to the International Space Station (ISS). Since 2012, SpaceX has flown its cargo ship *Dragon* to the ISS 20 times on newer *Falcon 9* rockets. In November 2020, SpaceX launched a crew of four astronauts to the ISS.

As a private aerospace company, SpaceX has built up a reusable rocket and launch system that has significantly lowered the cost of space flight. More than 50 SpaceX boosters have flown back to Earth, with as many as possible being refurbished for future flights.

In 2015 SpaceX announced it was establishing Starlink, a network of low-orbit satellites to provide internet connectivity to remote locations on the ground. SpaceX hopes to eventually have 42,000 satellites in this so-called "constellation".

The first 60 Starlink satellites were launched in 2019 aboard a *Falcon 9* rocket. By May 2121 more than 1,700 Starlink satellites had been launched, providing broadband

internet service in selected areas around the world as part of a beta-test program. In Australia, current access to this program is limited to people in northern Victoria and southern NSW.

Mars, though, has always been Musk's goal, and SpaceX is developing a vehicle capable of going to Mars. That vehicle, known as *Starship*, is a massive rocket currently in prototype form.

The size and scale of Starlink's satellite canopy ambitions has caused a degree of concern from astronomers and amateur star-gazers concerned that the bright, relatively low-orbiting objects will interfere with observations of the wider universe. Presuming the Starlink rollout continues, is likely to have a greater direct impact on people around the world that travel to Mars - a race already with a number of competitors that will play out on future TV news feeds but be a bit "too far away" for many people.

In the next edition, I will look at the other private commercial players in the space travel area, Jeff Bezos, Richard Branson and the late Paul Allen.

Paul Linnane
USB 1969-70



A trail of Starlink satellites characterized by their dotted appearance moves across a starry night sky. Image via [Star Walk](#).

CRO Trackers 14th Picnic Day

Further to my email on 9/04/2021 10:07 am, I wrote:

Due to the weather conditions expected over the weekend and Sunday 11 April expecting to be a wet and wild day we have postponed our annual get-together.

Far better for us to be sitting in Whitman Park V Shelter on a lovely autumn day enjoying each other's company and sharing a meal than being wet and miserable.

I will try and book for next month and hope we pick some good weather; I will also try and give you all as much notice as I can so you can hopefully leave the day free in your social calendars.

Unfortunately, since then, May has not been forthcoming with any sort of reasonable weather, especially when trying to do a long-range forecast for a day when it is not windy and raining.

We are now into the middle of June and the weather seems to be playing us no favours.

I suggested that maybe we could meet at a café where there is indoor seating and instead of doing our Trackers Picnic/BBQ, we could do a Tracker's Brunch and make it central to the city.

I did suggest to a few that we could go to the **Bayside Kitchen to do a Tracker's Brunch**, they have indoor seating, it is not too far from the city and the prices are reasonable. We could meet at the usual 'lift off' time of 11 am and each would pay for their own. This suggestion was well received by the majority.

If anyone would like to do this I would be happy to organise it for Thursday 1st of July 2021. It would be appreciated if you could let me know by return email if you are interested.

As I say – if you can PLEASE email me back on this it would be appreciated.

Bayside Kitchen Matilda Bay



5 Hackett Dr, Crawley (9,400.71 mi) Perth, WA, Australia, WA 6009. Get Directions +61 8 9386 9229. Contact Bayside Kitchen - Matilda Bay on Messenger. Cafe · Australian Restaurant. Opens at 7:30 AM. Closed Now. Popular hours. Page Transparency ... +

Followers: 2342

Location: 5 Hackett Dr, Crawley, Perth, WA, Australia, 6009, Western Australia

Phone: (08) 9386 9229

[Bayside Kitchen - Matilda Bay - Home | Facebook](#)

<https://www.facebook.com/baysidematildabay/>

“This Page”

This page is here because I ended up with an odd number of pages due to putting the flyer in for the Carnarvon Space Festival Stage Four event. For those getting this by email it matters not – it is only problematic for printing purposes (some of our trackers still get a printed copy of the CRONicle). I was tempted to use the adage,

‘This page intentionally left blank.’

So, as I have often wondered, **where in the world are all our CROTrackers**, I thought I would use this page to find out.



When I send out an email on the “TRACKER” list it is disseminated to over 90 email addresses. Sometimes the content of some emails is only relevant to “local” trackers, i.e., living in and around Perth or in other towns within Western Australia.

If I knew where you were in terms of what country, what State, what suburb (in WA) you lived in, I could do up a ‘CROTrackers WA’ email group.

It would be interesting to see just how far our CROTrackers are spread out around the world.

When you read this, I would love for you to

- a) hit the ‘reply’ button on your email and just put your whereabouts in the subject line, or
- b) if you are keen, maybe just send a few lines about where you are, how you are going and maybe send a hello/howdy to some of your old colleagues from CRO to go in the next “Chit Chat” page.

I am always looking for people to say Hi! and stay connected via the Chit Chat page.

So.... Where in the world are you????

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](#)

If undelivered, please return to:

CROTrackers
98 Ogden St
COLLIE WA 6225