SITREP

AIR FORCE ASSOCIATION NSW - NEWS AND VIEWS

CA-15 Kangaroo – When Australia Built One of the Fastest Piston Fighters Ever

From Plane Historia by Jake Lee Howarth

The CAC CA-15 was an Australian piston-engined fighter that was considered as the successor to the Boomerang. Its development was ultimately hampered by the delays caused by wartime logistical problems, accidents, and the postwar arrival of state-of-the-art jet technology. Projected to be more powerful and faster than even the Spitfire, in an alternative universe where the jet engine had not made such a timely appearance, the CA-15 would have been the fastest piston engined fighter ever made and perhaps Australia, rather than the USA, would now be world leaders in aviation.

CAC Boomerang

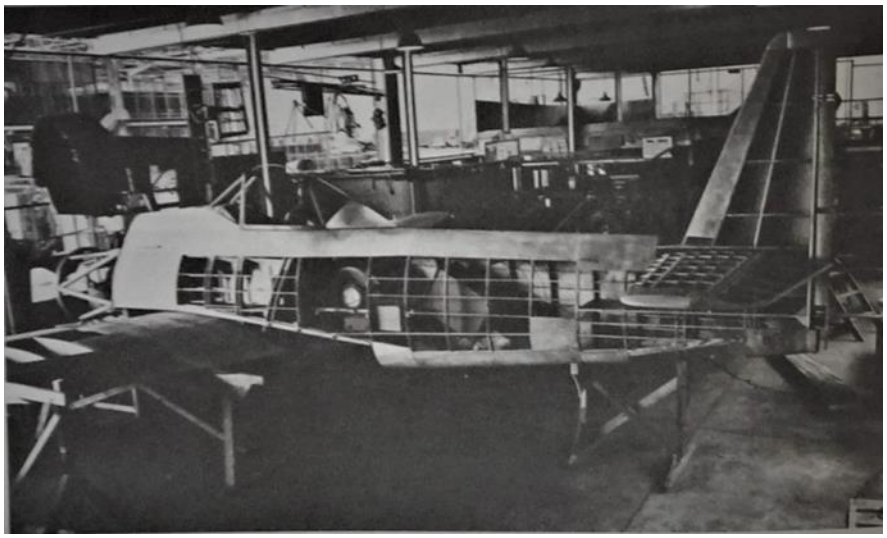
The CA-15 was first proposed in mid-1942 at the Commonwealth Aircraft Corporation (CAC) by its general manager, Lawrence Wackett, as an updated version of the Boomerang fighter and was to use the Pratt & Whitney R-2800 Twin Row Wasp engine. The Pratt & Whitney R-2800 was a 46 litre, 18-cylinder radial engine that developed around 2,200 hp. It was used in large numbers in aircraft such as the P-47 Thunderbolt, the F4U Corsair and the F6F Hellcat.

Interestingly, the chief designer was Friedrich David, an Austrian Jew who had escaped Germany before the outbreak of the World War Two, and who had been involved in the development of several German war planes as an employee of the Heinkel company. David had next moved to Japan to work for the Tokyo Denki company, where he had contributed to the Aichi HED3A torpedo bomber responsible for the assault on Pearl Harbor that had caused the Americans to enter World War Two. Having fled to Australia, David was now entrusted with making another fighter that would inevitably face-off against many of the enemy planes he had helped create.

By February 1943 a wooden mock-up had been assembled around the same time that the project was officially christened CA-15. In June 1943, following approval by the Royal Australian Air Force (RAAF), the design was registered as specification 2/43 issue 1 and development commenced. In a revealing report from August 1943, Wackett made clear that the purpose of the endeavour was not even to create an end product, but to instead provide intellectual stimulation to the more junior members of the company:

"After considering all aspects of the matter, and having regard to the commitments in hand and others ahead in the form of establishment of CA-17 (Mustang) production, it is considered advisable to regard the CA-15 as an exercise to keep alive the spirit of design, rather than a war weapon for

urgent development. Accordingly, it is proposed to employ some of the most promising younger design engineers on this job and to give it a low order of priority for the next six months, and avoid the job becoming an embarrassment to an already overloaded production department".



CA-15 early mock-up while it was still planned to use the R-2800.

In October 1945 the Department of Aircraft Production issued order No. CS1502 for one CA-15 fighter, expected to be constructed with a budget of 150,000 dollars and flightworthy within 3 months. No longer a mere academic exercise Wackett, reassigning many of his workers to the job, now wanted something concrete. Before the first prototype was assembled, a 1/6 scale model of the CA-15 was aerodynamically evaluated at the Aeronautical Research Laboratories of the Council for Scientific and Industrial Research (CSIR), where it produced respectable lift-to-drag ratios. (Ed: *In 1949, CSIR ceased all defence work for the military and was renamed CSIRO, the Commonwealth Scientific and Industrial Research Organisation.*)

The CAC CA-15 was a piston fighter with a length of 11.03 metres, a height of 4.34 metres, and a loaded weight of 4,882 kilograms. Propelled by a Griffon 61 V12 engine with 2,035 horsepower, its predicted top speed was 495 miles per hour, while it was anticipated to have an altitude ceiling of 28,000 feet that it could climb to at 5570 feet per minute. Its wings, which had a span of 10.97 metres, were the first of any Australian craft to utilize NACA 6000 laminar flow aerofoil sections, which markedly improved performance by reducing wing drag, and were much better than older configurations such as the British and American NACA 4 figure segments, which suffered from transitional flow over the upper wing surface.

The rest of the CA-15 was more conventional, and featured a semi-monocoque fuselage with stressed skin, a cockpit with a bubble perspex canopy protected by an armoured glass windscreen, and a tailplane that had a span of 4.22 metres.

CA-15 with engine cowling removed, showing the Rolls-Royce Griffon engine.

Although never installed, the CA-15 was anticipated to carry either six 0.5 inch Browning machine guns each with a capacity of 250 rounds, four 20mm cannons loaded with 120 rounds each, or two of each armament with mounting stations pre-built into the wing structure. Provision was also made for an undercarriage that could be equipped with one bomb of any type weighing up to 500 pounds.

Evidently, the end of the war only a month previously in September 1945 had done nothing to dampen enthusiasm for the CA-15, which began to take form in the earliest stages of the postwar era. Following a gauntlet of structural evaluations at the CAC factory including wing torsional tests, fuselage torsional and bending tests, and fuselage stress distribution tests, the CA-15 was ready to make its flight debut.

The CA-15 resembled a blend of P-51, Spitfire and Typhoon.

Operated by CAC test pilot James Schofield, on March 4th 1946 the single CA-15, given the RAAF serial number A62-1001, took to the skies for the first time and flew for a total of 15 minutes. This was followed up by 24 more test flights lasting until mid-June 1946 investigating performance and handling characteristics, during which the controls, control surfaces, brakes, and engine were variously modified to achieve optimum results. After 16.5 hours of flight time, on July 2nd 1946 the CA-15 was transferred to Laverton RAAF Base in south-west Melbourne for a slew of final assessments. It was here that the CA-15 got its nickname 'Kangaroo', after over-pressurised landing struts caused it to bounce up and down in the style of Australia's national animal during a routine taxi run.

The CA-15 though would experience more misfortune when trials were paused until March 1948 after an incident on December 10th 1946, in which pilot Flight Lieutenant Lee Archer was forced to make a wheels-up landing after a major hydraulics failure. The service span of the CA-15, a piston driven fighter which was surprisingly never fully tested, was ultimately cut short by the emergence of superior jet powered craft which largely replaced the older generation from the late 1940s. The tragedy of the CA-15's demise is even more pertinent considering that it was set to be the fastest piston-aircraft ever made. With a forecast top speed of 495 miles per hour and climb rate of 5570 feet per minute, the CA-15 was going to be considerably quicker than the Tempest (402 mph/4700 ft/min), Thunderbolt (402 mph), Mustang (434 mph/3475 ft/min), and even the iconic Spitfire (443 mph/5000 ft/min).

In one of the few recorded measurements to its name, it had already shown promising signs it would live up to expectations after making headlines in Australia on May 25th 1948 after clocking a speed of 502 miles per hour in a dive performed by Archer in Melbourne, but unfortunately the rapid pace of technological advancement was to stop it in its tracks.

CA-15 nose view. It was a truly stunning aircraft.

Partially disassembled at RAAF Laverton, in 1953 the CA-15 was briefly considered as a possible entrant in the New Zealand Air Race, but this suggestion was quashed by RAAF High Command who had no further use for a plane that was now becoming increasingly outdated. From here on the CA-15 disappeared from the record for several decades, only to remerge in 1986 when an American aircraft enthusiast keen to build a replica asked the CAC for the blueprints. Duly obliging, CAC packed them up in a box set for delivery, but in a twist of fate, a rubbish collector accidentally picked it up and threw it into a local tip where the only known CA-15 schematics were incinerated before staff could catch up to them.

Now, with only a couple of sketches of some of the minor components and the general layout still in existence, but without a detailed plan, the fastest piston-engined aircraft ever conceived will certainly never again see the light of day.

Bomber Command Veteran turns 100

21 November 2023

From www.Defence.Gov.Au/News-Events, by Pilot Officer Shanea Zeegers

World War II Bomber Command veteran Angus Hughes recently celebrated his 100th birthday at RAAF Base Edinburgh. Mr Hughes received a 100th birthday cake decorated with the RAAF badge and an image of the 467 Squadron Lancaster 'S for Sugar' - the aircraft he piloted on his first combat mission.

At the celebration in Edinburgh officers' mess, Deputy Senior Australian Defence Force Officer Group Captain Greg Weller presented Angus with a 100 Squadron gift which including an image of the iconic 467 Squadron Lancaster and a 100 Squadron coin. "It was an honour for RAAF Edinburgh to host one of our few remaining Bomber Command veterans – particularly somebody like Angus, whose experiences and stories are something that our young serving aviators can learn so much from," Group Captain Weller said.

Centenarian and Bomber Command Veteran Angus Hughes cuts his birthday cake with veterans, Group Captain Greg Weller and members of 462 Squadron at RAAF Base Edinburgh.
Photo: Sergeant David Cotton

Born in Adelaide in 1923, Angus joined the RAAF in July 1942, aged 19, and completed navigation training at several South Australian RAAF bases, including Mt Gambier and Port Pirie. In July 1943, he deployed to the UK, where he completed heavy bomber conversion training at 27 Operational Training Unit before joining 467 Squadron, stationed at RAF Waddington in Lincolnshire. On his 32nd mission in late September 1944, his aircraft was hit by enemy flak over Germany, forcing the crew to bail out, with one not surviving. Mr Hughes managed to evade German forces for three days before they caught him just weeks before his 21st birthday.

Mr Hughes spent three months as a prisoner of war at Stalag Luft 7 in Baykau, Germany. In January 1945, he and 1500 other prisoners were forced to march for 21 days over a distance of 200 kilometres due to advancing Russian forces, ultimately arriving at Stalag II. The march took place during bitterly cold conditions, with the road covered in ice and snow. Mr Hughes remained at Stalag 3A for four months until released by Russian forces in April 1945. In late May, following Victory in Europe, he was repatriated to the UK and returned to Australia in October 1945. He was demobilised in December with the rank of flying officer.

As one of the few remaining Bomber Command veterans in South Australia, he continues to actively participate in Air Force ceremonies in Adelaide. Mr Hughes' visit to RAAF Edinburgh was an unforgettable occasion for all involved. He shared his survival stories with junior aviators, who would have only ever read about them. The visit also allowed him to meet serving members of the Air Force that he served in 80 years ago. The day was part of RAAF Edinburgh's initiative to honour Air Force centenarians, preserving their legacy and connecting them with current serving aviators.

A Screw Loose

From Dave Moles DFM

This is a true story that I will never forget: it involves two great airmen who have since passed. Lest we forget.

It was 1969 in South Vietnam at the RAAF Base in Vung Tau: myself and the late George Edwards DFM were on Bushranger 71 and 72. It had been a bad day; we'd had an aircraft shot down and the crew had been lifted out, in what condition we did not know. We returned to Vung Tau at about 1930 hrs, had a meal and as we had the next day off, retired to the bar. When it shut, we got a bottle of port each, and went to George's bed space.

Around midnight a Service Policeman stormed into the room wearing starched greens, painted helmet liner, pistol and baton plus arm band (he was very prim and proper). When he started shouting, "I got you aircrew drinking in the lines," George said "Piss off, mate you're pissing me off!" I then said "If you don't go, you will be very sorry." or words to that effect.

RAAF Bushranger Iroquois in Vietnam

Then a voice said "If you don't go Corporal, I will charge you for being in these lines without my permission!" I knew that voice; it was the CO, Nugget Hibben. He also said "Don't ever come into my lines again. I will be seeing your CO tomorrow." Then he turned to George and me and said, "I thought I'd find you two here. I've just come from the hospital; they are going to be all right." We both said "That's great sir, would you like a drink?" He replied "Just one, then bed."

The next day we had off, so we went to Back Beach for a swim and a few beers. We never heard any more about that night or saw any screws in the lines again.

Full Grunt Departure

From Col Coyne, President No. 37 Squadron (RAAF) Association C-130E Loadmaster 1981-1990

I was the Loadmaster on a task in July 1981 taking Army Staff College on their study tour of Western Australia. Our task was to fly them to the relevant locations where they observed local manufacturing and mining industry operations. We normally arrived early morning so they had a full day for observation and consultation, so the crew had the rest of the day/evening to entertain themselves.

On 14 July flight time from Pt Headland to Broome was 1.2hrs, arriving about 0930. After putting the aircraft to bed, picked up a hire car, having the rest of the day and evening at leisure.

After a counter lunch at the Roebuck Bay Hotel, we toured the town, ending up at the wharf where a very large tug was moored. There was unanimous agreement the tug needed some 37SQN stickers attached so we approached the day watchman for a tour of the vessel.

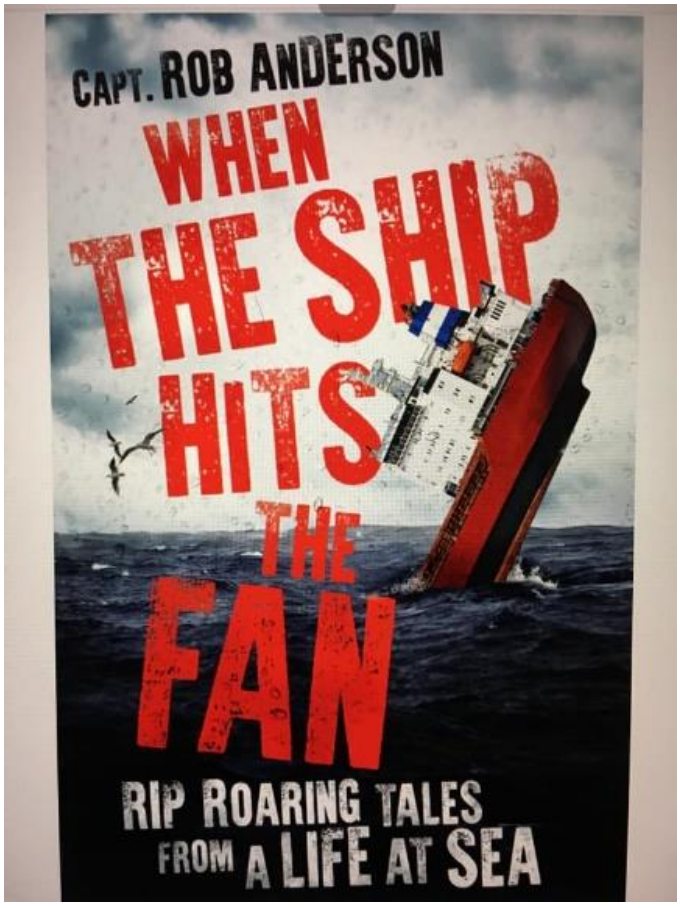
That's a big tug!

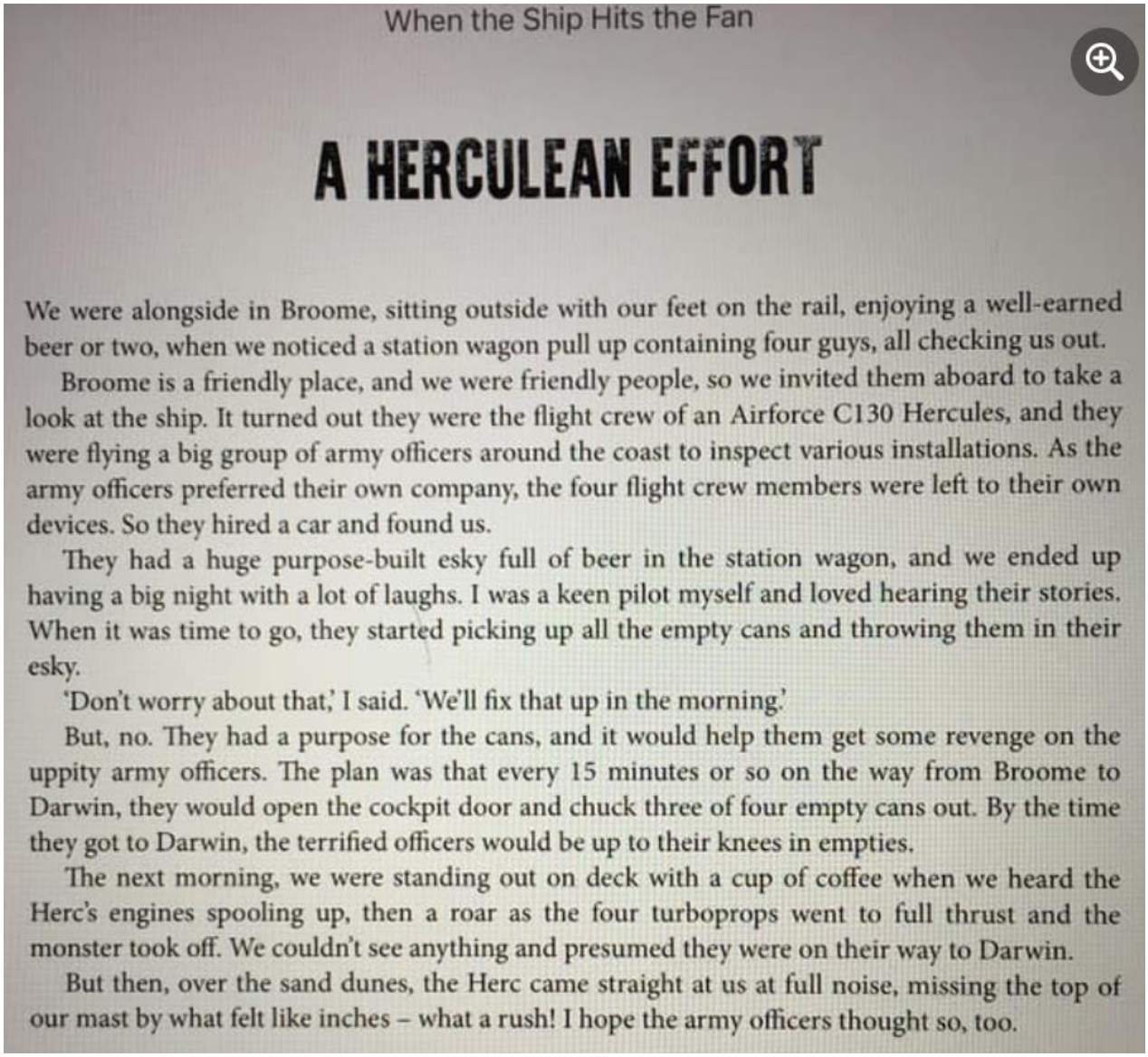
Long story short, the vessel captain invited our crew down to his wardroom for a beer. Being good RAAF representatives, we accepted his offer and imbibed many beers throughout the afternoon. There were discussions about our aircraft's operations including max effort full power performance. The vessel captain explained how the tug was sometimes required to tow barges or stricken vessels utilising what he called 'full grunt power'.

The captain's fridge was getting low on stock when I suggested to our aircraft captain, CO of the squadron at the time, I could go and get Eric from the station wagon up on the wharf. The vessel captain expressed a bit of concern that 'Eric' had been left on the wharf in such high temperatures but we assured him he was OK, just full of booze. The look on the captain's face when we came down the steep stairs to his wardroom with Eric was priceless. We enjoyed a great afternoon and evening, invited to stay for dinner where the chef made a lamb curry utilising the eyes out of many lamb chops.

The following morning the CO set up a departure plan/route inscribed on a disposable paper plate titled "Full Grunt Departure", taped on to the Doppler radar screen. Our senior Army personnel seated on the bunk were not impressed with this 'thing' taped up there in full view thinking the crew was having a shot at them, not realising it was in relation to our departure to overfly the tug at the wharf.

During the flight from Broome to Darwin, 3.6hrs, the CO placated the senior Army officers where he let them in on the joke we would play on the passengers down the back during the transit flight, see the story below (from the book at right) where our antics came back to bite us in the bum many years later. Obviously, a memorable trip for us and the tug crew.





When the Ship Hits the Fan

A HERCULEAN EFFORT

We were alongside in Broome, sitting outside with our feet on the rail, enjoying a well-earned beer or two, when we noticed a station wagon pull up containing four guys, all checking us out.

Broome is a friendly place, and we were friendly people, so we invited them aboard to take a look at the ship. It turned out they were the flight crew of an Airforce C130 Hercules, and they were flying a big group of army officers around the coast to inspect various installations. As the army officers preferred their own company, the four flight crew members were left to their own devices. So they hired a car and found us.

They had a huge purpose-built esky full of beer in the station wagon, and we ended up having a big night with a lot of laughs. I was a keen pilot myself and loved hearing their stories. When it was time to go, they started picking up all the empty cans and throwing them in their esky.

'Don't worry about that,' I said. 'We'll fix that up in the morning.'

But, no. They had a purpose for the cans, and it would help them get some revenge on the uppity army officers. The plan was that every 15 minutes or so on the way from Broome to Darwin, they would open the cockpit door and chuck three of four empty cans out. By the time they got to Darwin, the terrified officers would be up to their knees in empties.

The next morning, we were standing out on deck with a cup of coffee when we heard the Herc's engines spooling up, then a roar as the four turboprops went to full thrust and the monster took off. We couldn't see anything and presumed they were on their way to Darwin.

But then, over the sand dunes, the Herc came straight at us at full noise, missing the top of our mast by what felt like inches – what a rush! I hope the army officers thought so, too.

Excerpt from the book 'When the Ship hits the Fan'

Play on: Air Force Band turns 100

From www.defence.gov.au/news-events, 25 October 2023. By Flight Sergeant Ralph Whiteoak

The Royal Australian Air Force Band under the direction of Squadron Leader Dan Phillips in concert at the Melbourne Recital Centre in August 2022. For the past century, the Royal Australian Air Force Band has been lifting troop morale and winning the hearts and minds of the Australian public.

To celebrate its centenary, the Air Force band is holding a concert on November 3 and releasing a book about its history. Commanding Officer Air Force Band Squadron Leader Dan Phillips said the band continued to support Air Force. "Music has always been a part of the culture of Air Force," Squadron Leader Phillips said. "Whether it be onstage in front of a crowd of thousands, bringing people together to sing, or on parade for special events, it has the power to transform any occasion. "We are very fortunate to have this amazing, unique asset here in the Air Force band."

August 20, 1923, marked the inauguration of Air Force music, and is the date when Hugh Niven, the first official Air Force bandmaster, was appointed to run a part-time band at Point Cook. There were musical ensembles in the Air Flying Corps prior to this date, such as 1 Squadron's formation of a concert party and camp orchestra in 1916 to entertain troops in Egypt, and 'The Flying Kangaroos' and 'The Gee Whizzers' who gained popularity in England in 1918.

The Royal Australian Air Force Band under the direction of Squadron Leader Dan Phillips in concert at the Melbourne Recital Centre in August 2022.

However, the appointment of an official bandmaster marked the recognition by Air Force of the rich musical heritage and cultural impact that an Air Force band would bring to the organisation. Since then, the band has played an important role in supporting ceremonies.
Notable events have included:

- the opening of Parliament House in Canberra in 1927
- ceremonial support for the presentation of the Queen's colours for RAAF in 1952
- support for the royal tour of Queen Elizabeth II and Prince Phillip in 1954
- official band of the Olympics in 1956
- morale-boosting concerts for Australian troops deployed to Vietnam and Malaysia in 1969
- Royal Edinburgh Military Tattoos
- forces entertainment tours to East Timor, Iraq, Afghanistan and the Solomon Islands
- Anzac Day ceremonial support in Gallipoli, Villers-Bretonneux in France and Australia
- support for the AFL and NRL during grand finals and Anzac Day matches.

Their bestselling album Thirty Smash Hits of the War Years was even awarded a gold record in 1975.

The band has been through many iterations since 1923. A second part-time band was formed at RAAF Base Richmond in 1932, followed by a significant change in 1952 with the creation of the famous RAAF Central Band, an equally important musician muster that progressed Air Force music from the amateur to the professional. A second full-time band, the Air Command Band, was also formed in NSW in 1969 to cater for the increasing demand for music services within the RAAF.

The RAAF had two bands until 2008, when both bands were amalgamated into the one RAAF Band, based at Laverton. Today's Air Force band has 40 full-time professional musicians and about 20 reservists with whom they support events nationally and abroad. From this limited number of personnel, Air Force band capability boasts a symphonic wind band, ceremonial band,

big band, rock bands, jazz ensembles, wind quintet, brass quintet, clarinet quartet, fanfare team, bagpiper and a selection of fine buglers.
To mark 100 years of the RAAF, the band recently completed the feature-length film *Through Struggle to the Stars*. A book about their own history by Dr Chris Clark will soon be released. Fittingly, the Air Force band is also hosting a concert at the Melbourne Recital Centre to celebrate 100 years of music-making in the Air Force.

'Last Action Hero' Now Showing

Reprinted with permission from CONTACT Magazine

The last RAAF aircraft to have engaged in combat in a conflict has been restored and is now on display at the RAAF Williamtown Heritage Centre (WLM AHC).

[*Above is official Defence line – though I'm pretty sure RAAF aircraft have been engaged in combat in the Middle East more recently – not to mention Vietnam – Ed]*

Meteor A77-851 (aka 'Halestorm') on display at the RAAF Williamtown Aviation Heritage Centre.
Story by Flight Lieutenant Karyn Markwell and Flight Lieutenant Julia Ravell.
Photo by Group Captain Peter Norford.

Restoration of the Meteor A77-851 (aka 'Halestorm'), in which Sergeant George Hale shot down a MiG-15 in the final air-to-air engagement of the Korean War, was overseen by the Royal Australian Air Force's History and Heritage branch (HH-AF). Warrant Officer Stan Lawler from the Directorate of Air Force Heritage said RAAF Williamtown was the right spot for Halestorm as it was an aircraft of 77 Squadron, with 77 Squadron based at Williamtown.

"The ranks of Korean War veterans are getting thin, so it's good to have Halestorm completed to honour them – especially since this year is the 70th anniversary of the Armistice of the Korean War," Warrant Officer Lawler said.

On March 27, 1953, Sergeant George Hale from 77 Squadron flew Halestorm on a routine reconnaissance mission over North Korea, during which he engaged with, and shot down, an enemy MiG-15 fighter in the last air-to-air engagement of the war.

Sergeant George Hale with Meteor A77-851 (aka 'Halestorm').

Following the Korean War, the Royal Australian Air Force converted Halestorm into a remotely piloted aircraft and used it to conduct aviation trials at Woomera in South Australia. Volunteers from the South Australian Aviation Museum later recovered and refurbished the aircraft's cockpit and forward fuselage and put it on display. In early 2022, the museum gifted the cockpit and forward fuselage to the Royal Australian Air Force.

The restoration of Halestorm took about 18 months, which included merging the cockpit and forward fuselage to another Meteor to create the aircraft now being showcased at RAAF Williamtown Heritage Centre. "We managed to get a lot of unique components, making the aircraft almost identical to the one that flew in Korea," Warrant Officer Lawler said. "We were very lucky to find parts that had been in storage at the RAAF Museum at Point Cook. "These included a long-range fuel tank to fit to the underbelly, three out of the four cannons and rocket rails that went underneath the wings. "The aircraft just bolts together like a Meccano kit."

Wing Commander Linda New, the officer in charge of RAAF Williamtown Heritage Centre, was pleased to receive such an important heritage aircraft into the centre's collection. "Halestorm complements our display of artefacts commemorating 70 years since the cessation of hostilities in Korea, and honours the service and sacrifice of those RAAF members who served in Korea – particularly the members of 77 Squadron," she said.

The Fire Fighters

From Jim Hall

One dark night outside a small town near Kempsey, a fire started inside the local chemical plant and in a blink of an eye it exploded into massive flames. The alarm went out to all the fire departments for miles around.

When the volunteer fire fighters appeared on the scene, the chemical company president rushed to the fireman in charge and said, 'All our secret formulas are in the vault in the centre of the plant. They must be saved. I will give $50,000 to the fire department that brings them out intact.'

But the roaring flames held the fire-fighters off. Soon more fire departments had to be called in as the situation became desperate. As the firemen arrived, the president shouted out that the offer was now $100,000 to the fire station who could bring out the company's secret files.

From the distance, a lone siren was heard as another fire truck came into sight. It was the nearby Wittitrin rural volunteer fire brigade composed mainly of blokes over the age of 55. To everyone's amazement, that little run-down fire engine roared right past all the newer sleek engines that were parked outside the plant. Without even slowing down, it drove straight into the middle of the inferno. Outside, the other firemen watched as the old timers jumped off right in the middle of the fire and fought it back on all sides. It was a performance and effort never seen before.

Within a short time, the old timers had extinguished the fire and had saved the secret formulas. The grateful chemical company president announced that for such a superhuman feat he was upping the reward to $200,000, and walked over to personally thank each of the brave fire fighters. The local TV news reporter rushed in to capture the event on film, asking their chief, 'What are you going to do with all that money?' 'Well,' said Michael, the 56-year-old fire chief, 'The first thing we're gonna do is fix the brakes on that f***ing truck!'

The Pilots who Ejected Underwater – and Lived

By Stephen Dowling, from BBC Future

Taking off from aircraft carriers is never routine, and there have been many accidents. Ejector seats have saved many of these pilots – including some whose planes were already under the water.

Image credit: Getty Images

On 13 October 1954, a Royal Navy aviator called Bruce MacFarlane took off from the deck of the British aircraft carrier *ALBION*, somewhere in

the Mediterranean. Moments later his plane plunged into the water in front of the ship. MacFarlane was flying a heavy and powerful aircraft called the Westland Wyvern, an attack fighter powered by an enormous engine, which drove two contra-rotating propellors at the front of the aircraft, each spinning in a different direction.

The Westland Wyvern had serious engine problems caused by the high g-forces encountered when launching off a carrier (Credit: Mirrorpix/Getty Images)

The Wyvern had had a troubled development and had only entered service the year before. Albion's cruise, which had started in September, had identified a serious problem. Taking off, the Wyvern would be subjected to high G-forces which momentarily starved the engine of fuel, causing what is known as a "flame out". The Wyvern, weighing more than seven tonnes without fuel or weapons, was not a natural glider. During this first deployment, several Wyverns were lost off the bow of the carrier after taking off. But MacFarlane's accident was something different.

Despite being powered by propellors, the Wyvern was a product of the jet age, and was one of only a few non-jet aircraft to feature an ejection seat – vital for pilots whose aircraft plummeted into the water just a few seconds after coming off a carrier's desk. MacFarlane had no time to activate his seat before his Wyvern plunged into the water and the 24,000-tonne aircraft carrier bore down onto the submerged plane. The ship cut the submerged Wyvern in two as it ploughed over it. He waited for what must have been agonising seconds for the carrier to pass before he was able to jettison the plane's canopy. Then he pulled the handle…and nothing happened. MacFarlane pulled the handle again, and this time the seat exploded into action. According to a report on the incident in the aviation website Hush-Kit, the pilot "now found himself tumbling in the maelstrom of water under the *ALBION's* hull. As if that wasn't enough, he soon realised he was being dragged deeper under the water". It continued: "Somehow, able to free himself from the tangle of webbing that was his parachute, he then discarded his dinghy pack and began to rise agonisingly slowly towards the surface."

MacFarlane used his seat in a way the designers had never intended, and became the first ever pilot to successfully eject from an aircraft underwater. Ejector seat technology was in its infancy at the time, and only a few dozen successful ejections had taken place by this point. The seat's designers, a British company called Martin-Baker, had not even considered whether the seats would still work in such conditions. "You don't want to eject underwater because essentially, you're turning your aircraft into a bomb," says Joe Coles, Hush-Kit's editor. "The explosive charge dissipates into the atmosphere normally. "Pilots who eject from the water's surface have a whole set of other challenges, including the disorientation of suddenly being underwater, and a chance of decompression injuries – the 'bends' – if they rise to the surface too quickly. "In the 1950s the early carrier jets are using really terrible engines and they're just falling out the sky all over the shop, flopping off the deck with insufficient power," says Coles. The high accident rate of many of these aircraft spurred development of improved ejection seats more likely to save lives.

Martin-Baker eventually built a version of its Mark 6 seat specifically for the carrier-based Blackburn Buccaneer. "The idea is that you get compressed air to do the work – you don't want explosives underwater," says Coles. "So, with the Mark 6, you blast the canopy off with compressed air, and you push the pilot up with compressed air. "When the aircraft reaches a certain depth underwater, the aircraft knows it's there and initiates the underwater escape procedure…the plane knows and it's like, 'Right let's get this guy out. We don't want to be underwater'."

MacFarlane's escape was followed, a decade later, by a US Navy aviator's successful ejection from an A-7 fighter which had landed incorrectly during a night exercise and was left hanging off the edge of the deck, its tail hook caught on the landing wire. The pilot, Russ Pearson, later wrote for the naval magazine The Hook (via The Ejection Site): "In less than a heartbeat, the plane was precariously perched on the edge of the flight deck…to eject now would be suicidal – the trajectory of the ejection seat's rocket motor would send the seat skipping across the water like a flat rock on a farm pond." The A-7's engine cycled down until it was moving too slowly to maintain electrical power. "The plane tumbled off the flight deck and plunged downward some 60ft [18m] prior to impacting the Pacific – the sensation was like falling into a black hole," Pearson wrote.

Russ Pearson was flying in an A-7 which slipped off the deck after a botched night landing (Credit: Corbis/Getty Images)

US Navy training had taught pilots that the average plane would sink 10ft (3m) every second, and they would only have about 10 seconds to escape before it was too late. Pearson pulled the handle and was blasted into the dark water, the force knocking the oxygen mask from his face. Disoriented, he struggled to work out up from down – and was saved by the flickering lights of landing torches the carrier's flight-deck directors had thrown into the water.

Pearson was almost dragged back under by his partially opened parachute and only managed to inflate his life preserver by bracing against his plane, which was floating just underneath the surface.

Another decade later, a third pilot – this time from India – also managed to escape from his downed aircraft after it had crashed into the sea after taking off. Such incidents, however, remain very rare.

In November 2021, the pilot of one Royal Navy F-35B fighter had to eject very close to a carrier soon after take-off (possibly because protective engine covers had not been removed before launch). The F-35B features a system which automatically ejects the pilot if it senses it is about to hit the surface. It's a much more sophisticated version of a system used in a Soviet jump jet called the Yak-38, which entered service in the 1970s. The Yak was similar to the Harriers used by the UK and the US but had a less powerful, less reliable engine. If either of its lift jets malfunctioned, or the plane rolled more than 60 degrees, the pilot was automatically ejected. A not exactly pleasant surprise, but perhaps less stressful than trying to claw your way out of your seat, somewhere underneath the water's surface…

No Bull…

From Col Coyne, President No. 37 Squadron (RAAF) Association C-130E Loadmaster 1981-1990

50 Years ago, in October 1973, 37SQN C-130E A97-167 became the first RAAF aircraft to land in the People's Republic of China (PRC). The task was to transport a Murray Grey bull 'Saber Bogong ' from Darwin to Peking (Beijing), a gift from Gough Whitlam on behalf of the Australian Government.

A C-130E Hercules transport from No 37 Squadron became the first RAAF aircraft to land at Beijing International Airport after it arrived on this day carrying a Murray Grey stud bull as a gift from Australia to the People's Republic of China. The flight was occasioned by Prime Minister Gough Whitlam's five-day visit to China–the first by an Australian Prime Minister–which began on 31 October.

The Hercules (A97-167), piloted by the CO of 37 Squadron, WGCDR Roger Bateson, flew from Laverton via Darwin, Hong Kong and Canton (Guangzhou), carrying the 1250-pound (567 kg) bull named 'Saber Bogong' in a specially-constructed pen. The aircraft also carried animal feed and a special handler to look after the prized cargo during the flight.

After being met at the airport by Australia's newly-appointed Ambassador, Dr Stephen Fitzgerald, and officials of the Chinese Department of Agriculture, the crew was shown historic sights during a brief stopover. The bull was to assist the Chinese cattle breeding program; pity the bull was found to be infertile.

AT LAST it can be told: the true story of Sabre Bogong, the hapless Murray Grey bull presented to the Chinese by former Prime Minister Gough Whitlam in what must go down as one of the more curious diplomatic gaffes in relations between our two countries.

Problems arose even before Sabre Bogong was shipped to the People's Republic to cast his seed upon the lovely Chinese cows.

Sabre Bogong, alas, failed his sperm test. So another bull, Sabre Bogong II, was hurriedly substituted and Australian officials prayed the secret of the first bull's failure would not escape lest it give offence to the Chinese and bring shame on the prepotent reputation of the Murray Grey, so beloved of Collins Street farmers.

Sabre Bogong II eventually made it to China, but here the problems began to multiply. Young Bogong couldn't, or wouldn't, perform. To the everlasting shame of his breed, he showed little interest in the delectable cows at the Peking breeding station.

His local attendants were so contemptuous of him, the Australian bull that wouldn't or couldn't, they began calling him Tu Zi, a Peking colloquialism used to describe those who don't show much interest in the opposite sex.

This is not to suggest that Bogong was partial to his fellow Chinese bulls. Apparently, Sabre was simply a solitary fellow.

Not much has been heard of Sabre Bogong II lately, perhaps because the libidinous officials at the Australian Embassy in Peking, in their shame, have stopped visiting him.

But there are reports of little Bogongs running around — the result, no doubt, of a vigorous programme of artificial insemination.

Ironically the same aircraft, A97-167 returned to Beijing 9 years later, 4th - 16th November 1982, conveying Joint Service Staff College JSSC) study tour of China. While the JSSC staff and students were carried in-country by PRC military aircraft, the Herc crew was tasked to uplift the Entombed Warrior Terracotta Soldiers from Beijing to Hong Kong, where the consignment was uplifted by QANTAS to Australia for exhibition throughout the country in 1983.

One highlight of the task for the crew was being invited to attend the official JSSC welcome dinner in the Great Hall of The People next to Tiananmen Square in Beijing. The hosts were impressed when the whole crew exchanged their cutlery for chop sticks to savour such delicacies as crushed Panda Paw, Sea Slugs and of course Peking Duck, washed down with copious amounts of Tsing Tao Beer. The hosts toasted their visitors with "Moutai" which, according to the

label on the bottle I bought way back then, is 53% alcohol volume/103% proof! It is clear fluid, drunk from a small liqueur/shot glass and skolled after the Chinese equivalent of bottoms up "Ganbei".

In the Australian vernacular, it was like drinking "Chinese Brake Fluid".

'Coach' Radford

From Dave Bowden

I first met AVM Radford when he was a Flight Lieutenant completing the second year of a Science Degree as a mature age student at the RAAF Academy in 1962. As first year cadets, our class was flat out from 0630 to 1030 each day attending to the usual list of activities from laundry to parades to sport and study. It was pretty full on as we attempted to avoid the consequences of any minor misdemeanor. Those consequences were either a run around the airfield or extra drill starting at 0600 on the parade ground.

During the winter months, rugby was a major sport (hockey was the alternative) which involved training two afternoons a week and Ted became our coach. The Academy fielded a Reserve Grade team as well as Colts. As well as being our coach, he also practised what he preached by playing in the First Grade for the RAAF in the Melbourne competition. While many of us were just 18 and still growing physically, Ted was a tough man who with many years of experience was an excellent coach and practitioner of the game.

We often split the team into two smaller sides to allow moves to be tested and refined. In one set up Ted was running with the ball as my classmate attempted to tackle him. Now one of Ted's techniques in such an encounter was to turn his hip into a tackler as he unloaded his pass. The end result of the encounter was my mate encountered Ted's hip and upper body with quite a deal of force. During the review of the practice, Ted's comment was 'that will teach you to come in high for a tackle'. My mate ruefully agreed as he suffered a gravel rash from contacting Ted's face and afternoon growth, which my classmate said was like sandpaper.

Ted (red shirt) as CO 3 Squadron coaching the RAAF Butterworth Rugby team in 1969
The author is back row extreme left

Vietnam Days

From Jon Fallows

The following is a recollection of my experience when posted to No 2 Squadron RAAF during the Vietnam conflict. I wrote this short memoir mainly for my children, as my daughter one day said, "I don't know anything about you". So, I wrote a family history as well as this piece, The Vietnam Days. It was written for my children Leah and Joel in November 2020.

On August 3, 1962, the Australian Government became involved with the USA in the Vietnam conflict, and on 16 April, 1966, committed a squadron of bombers to the US Airforce. The military action was not called a 'war', probably for political purposes, but was rather called a 'police action', which is perhaps the most hypocritical and stupid thing politicians could have done. The unit committed to Vietnam was 2 Squadron which had been domiciled at Butterworth Malaya during the Malayan Emergency, so 2 Squadron went directly to Phan Rang from Malaya.

The first of the ground crews to go were from 482 Wing, Amberley in south east Queensland and although I volunteered, I didn't go until the second annual rotation. I went to Vietnam just after my 21st birthday. I flew to Sydney, then to Darwin on a chartered Qantas 707, then to Singapore, for breakfast, then on to Tan Son Nhat (pronounced Ton-son-ute) which is the main airport for Saigon (now called Ho Chi Minh City after Ho Chi Minh). Our landing at Saigon could have ended in tragedy as we nearly landed on top of a USAF plane that was taking off. Saigon was the busiest airport on earth at that point. I arrived in country on April 19, 1968. The story of the Qantas 707 charters is also worth the reader researching. At Saigon, we disembarked the 707 and waited under the wing of an old DC-3 for six hours (during which I counted 50 civilian 707s land bringing troops from the US) for a flight to Phan Rang where 2 Squadron was based.

Waiting under that DC-3 Wing was very hot, but it was the only shade on the tarmac, and we had no access to refreshments of any sort. Eventually, I said I was going to go find someone and sort out some water, at least. After a while, I saw an Aussie Warrant Officer (Army) and after speaking to him, he said to go back and wait. Pretty soon he was back with some money we could swap for Military Payment Certificates or MPC (more on that later), so when the flightline smoko shop came around, we bought practically everything they had. Pretty poor of the RAAF to leave us there for so long in the heat.

The flight to Phan Rang was quite a flight. An old Fairchild C-123 Provider taxied up, belching smoke from both engines and bullet holes everywhere, and out of the back came the loadmaster wearing his camouflage uniform and a wild western holster with the bullets all around, a 10 gallon hat, and calmly said, "Phan Rang?". We looked at the plane, him, then each other, wondering what on earth the options were (as we were seriously considering NOT getting on that plane). Also, it had in faded letters along the fuselage 'Royal Thai Air Force' and the roundel of the Royal Thai Air Force. Of interest is the WE on the tail. These letters signified which squadron the plane belonged to. WE was the 19th Special Operations Squadron of the 315th Air Commando Wing, USAF, based at Phan Rang. I have a soft spot for these Fairchild C-123 Provider workhorses, as I spent many hours flying around Vietnam in these later on.

Our taxi to Phan Rang

We got on board, taxied out and were soon on our way, either to Phan Rang or a crash, but neither appealed. During the flight, we lost an inboard radial engine and were running on one radial prop and two small jet pods. Phan Rang is about 270 kilometres from Saigon. As we were on final approach to Phan Rang, the wild-west load master opened the bottom half of the rear loading doors and picked up what looked to be a pile of rags and out of the rags came a rope with a shackle which he then attached to the aircraft bulkhead. Just as we touched down, he picked up the pile of rags and threw them out of the back of the plane. The rags turned out to be a drag chute. We had lost one of the engines in flight, so on touch down, the pilot could not use reverse thrust. The parachute helped slow us down. Phan Rang had an all-weather 12,000 foot fighter strip, so I have no idea why we needed the chute, but apparently we did. Soon we taxied in and were met by a RAAF bus to transport us to our place on the base. That was an interesting introduction to Vietnam.

The 2 SQN area on Phan Rang Air Base, SVN

We were billeted in the 2 Sqn barracks which were entirely separate from the USAF, although the Squadron was a subordinate unit of the USAF 35th Tactical Fighter Wing. We were under the direct command of the US 7th Air Force. I was on the flight line for six months and in the base armoury for about five months while at Phan Rang (which means 'happy valley'). On the flight line, we worked a six day roster of 12 hours (alternating day and night shifts) and my day off was Wednesday. In the Armoury was weekday hours only, unless under imminent threat of invasion by millions of VC (Viet Cong).

All domestic quarters were called 'hooches' and my billet was on the second of two floors. There was an external staircase at each end open to the elements. The floors were all open and beds separated by lockers. The hooches did not have glass windows, but had mosquito mesh inside fixed louvers. Fully air-conditioned with flow thru ventilation! The 'hooches' were comfortable enough, except during the monsoon season when it was rather breezy; however, it was also hot there, even during the monsoons.

The domestic area from the road seen in the first photo. Hooches on the left, ablutions on the right.

The buildings were well constructed by the No 5 Airfield Construction Squadron, although much more was done by the 2 SQN members themselves after initial construction. This further construction went on into the third rotation of 2 SQN personnel. We were well briefed about local 'conditions' which included things like malaria (we had to take hydroxyl-chloroquine twice a week), dealing with the locals, what to say and do if captured, the Geneva convention (waste of paper), US propaganda and so on. All around the domestic area were these signs 'alarm procedures' ever reminding us of the situation we were in. One could pretty much bet that we would have a 'condition red' or 'red alert' many times a week, and sometimes several times in one night.

We used to get 'hit' regularly, almost nightly, usually between midnight and 5am, by mortar and small rocket fire deliberately designed to keep us awake as it was basically a war of attrition. They would start at midnight, fire off about six rounds from one point, and then go home; meanwhile another crew would be some distance away and start their six or seven rounds at 12:20, and the same pattern throughout the rest of the night. Of course, every time there was 'incoming' (the mortars and rockets), the sirens would start and you would be woken to very

loud wailing sound and even louder explosions. We were supposed to get up, get dressed, and go downstairs into a sandbag bunker (one at each end) and stay there to defend if there was a massive ground invasion or, the all clear was given. We had many assaults on the perimeter, but only by small bands, and they mostly ended up departing this world as there were WWII type defence towers about every 100 metres along the 39 mile perimeter.

The most memorable thing, apart from the fear, was the noise. The sound of the explosions was loud and constant enough, but then there were the sirens, the artillery (about 400 yards away), and spookies (AC-130 Gunship) flying overhead. This photo is of a spooky with the mini guns along the side. You will have to follow the link below to see what they could do. Every night the spookies went up and every night you could hear them doing their stuff. One night we were in the direct firing line and were hit with 82mm mortars and 122mm rockets and our barracks suffered quite some shrapnel damage. There were no casualties, but there could have been. One 122mm went off about 30 feet from me. That woke me up!

When we were under attack, most of the guys headed for the bunkers which were immediately outside the entrances to the hooches, however, while I was in the Armoury, I had to get dressed, go out to the road (about 30 meters) and wait a jeep driven by one Flight Sergeant Geoff Lovell. Our task was to drive down to the flight line and prepare for a ground attack by millions of North Vietnam troops. The flight line was about one and a half kilometers away, all this while we were under rocket and mortar attack. Geoff was usually very drunk. The other job I had was to account for all ammunition and explosives (except bombs) used by the unit, as well as undertake demolitions of unexploded or surplus explosives as required. More on this later.

The English Electric Canberra Bomber was a first-generation jet powered medium bomber developed by English Electric in response to a 1944 Air Ministry requirement for a successor to the wartime de Havilland Mosquito fast bomber. So that is how old this aircraft was by the time I was in Vietnam (1968-1969). We had the Mk B20 variation. In Vietnam, we had eight aircraft and only one was lost during the four years six months, A84-231. The story of this aircraft and its positive identification is in the book, Magpies in Vietnam, by Doug Hurst. ISBN 978-0-9871685-1-1. The picture below is of A84-234, painted in 2 Squadron colours with the distinctive 2 Squadron red tail lightning flash. This aircraft also has bomb carriers on the wingtips, the same as were fitted in Vietnam, to which I must have fitted many bombs.

On arrival 'in country', we were given a PX (Post Exchange) ration card to use in the USAF PX (like a supermarket) which 'rationed' each of us to things like; one TV, one fridge, one microwave, etc. Included was also alcohol (except wine) and cigarettes. I distinctly remember that each of us was entitled to 10 cartons (100 packs of 20 cigarettes), as well as three (I think)

40 oz. (about 1.18 litre) bottles of spirits – per week! At the PX, one could get pretty much anything and the prices were really cheap, no doubt heavily sponsored by the US taxpayer. While we had access to the PX, there was also an 'Australian Services Canteen's Organisation' (ASCO) shop within the 2 SQN domestic area, staffed by a RAAF member. They were supplied directly from Australia using the supply ships 'JEPARIT' and 'BOONAROO'. While our food, through the mess, was supplied by the MACV (Military Assistance Command Vietnam) with considerable supplement from RAAF Butterworth in Malaysia, other goods were brought to us by these two supply ships. The Butterworth supplement was something organized (I think) by the cooks and was welcome. We also had occasion to get some local supplies that 'fell off the back of a C-123' coming from Dalat.

Our beer (along with other stores) was supplied through ASCO by the supply ships, and every six weeks we would get another supply of 82 pallets of grog. There were many times the 82 pallets only lasted about five weeks and we would be forced to drink rather poor American beer until re-supplied. That is about 118,080 cans, which means the 303 of us drank an average of 9.27 cans a day in a six-week period. Disgusting! There were three messes; Officers, Senior NCOs and Airman's. Our wet mess (the Airman's mess) was called the "Koala Bar' which was open every day running normal wet mess hours (10 till 10). Each afternoon I would go straight to the Koala Bar and down six cans of Australian beer. A can was five cents so it was expensive consumption! Normally we would have six cans, go shower and change, then have another six cans, then maybe watch a movie in our open-air theatre adjacent to the Senior NCO mess, while consuming another six cans or so. I actually watched John Wayne in the movie "Green Beret' at this outdoor cinema, while drinking beer and seeing the occasional display by a Spooky gunship in the hills behind the base. We periodically had 'casino nights' in the airman's wet mess, to which we invited as many Americans as possible. We set up gambling tables and during the night, fleeced the Americans for as much as possible. The cash we made was first mooted to be used in Vietnam, but someone suggested sending the money home to help buy guide dogs, which we did. I think we bought five altogether.

At one time, the JEPARIT supply ship was commandeered by the unions in Australia, and was loaded up with medical and other supplies and sent to North Vietnam. The Australian frigate HMAS PERTH was with the US 7th Fleet operating off the coast of Vietnam and was dispatched by the US Navy to intercept, turn JEPARIT around or sink her. One shot across the bow did the job; she turned around and steamed back to Australia. Mail would come to us from down south, probably Nui Dat or Vung Tau, then be flown up to Phan Rang by Wallaby Airlines - 35SQN RAAF Caribou based in Vung Tau. These planes had a very distinctive sound in the air, so everyone would hear Wallaby before it could be seen. It was a great day when mail arrived. In addition, 35 SQN was in Vietnam from 1 June 1966 until 13 Feb 1972 during which time A4-173 (aircraft designation) crashed. Over a period of time, the wing was replaced with another with USA markings. A4-173 is now at the Caloundra Air Museum, and it still has USA markings on one wing and RAAF markings on the other. See: https://rtfv-35sqn.org/category/history/#page-content

During my 'tour', the left wing unions in Australia started a strike campaign against us by not handling our mail. This did not go down too well amongst the Australians (Army, Navy and Air Force), so we very quickly mounted a campaign called "punch a postie on RTA'. Translated, this is "punch a postman upon repatriation to Australia". We were all in favour and this was actually aired in Parliament. See: http://hq1atf.org/postie.htm The mess (for eating – secondary thought!) was pretty good considering that the rations we got were mostly from MACV. Our cooks were pretty good as they tried, mostly successfully, to supplement our yankee rations with supplies from Butterworth (a Hercules C-130 came in once a week from Butterworth) and

anything we could beg borrow or otherwise steal from anywhere, usually supply runs to/from Dalat.

The Americans had a radio and TV network throughout Vietnam called AFVN (Armed Forces Vietnam Network), and these were the only broadcasts we could get in Vietnam, except for shortwave of course. The AFVN broadcast on AM and FM as well. You may remember the film based on the radio announcer Adrian Cronauer called "Good Morning, Vietnam", which is a hollywoodised version of events, however, this was the AFVN I remember. Because it was a military thing, there were no advertisements, per se, but there were ads like "make sure there is no sand in your magazines, as this will prevent your rifle from working", which was true. AFVN was heavily censored, of course, as was our mail leaving country. AFVN also had televised content, but I never saw any of it.

We had locals providing domestic duties for us. In my hooch, the girl's name was 'Dumb'. She did all the washing, ironing and cleanup in the hooch. She even ironed all the MPC I had left in my top drawer (MPC, Military Payment Certificates – military money one for one with the $US). It was illegal to carry $US in Vietnam. The girls were always trying to get cigarettes and soap powder from us. Soap powder is used to make petrol gel for incendiary devices and cigarettes were used as slow burning wicks. Needless to say, we were not allowed to supply. The MPC was in denominations from five cents to $20 (all notes) so you can imagine what a pocket full would look like all crumpled up. A can of beer from the wet mess was five cents.

For a time, I was the unit armourer, and was responsible for the upkeep and management of all small arms. Everyone was issued with a weapon – officers with pistols, SNCOs with F1 light sub-machine guns and other ranks with rifles; the SLR at the time.

A five cent MPC front and back - this is about actual size

Our portion of the flight line was at the southern end of the western side. Our single hangar was where most of our operation was and most of the functions required to operate and maintain aircraft. The hangar was used for minor aircraft servicing, engine changes and so on. Flight line work was repetitive and boring; same thing day in and day out. We would get the trolleys of bombs from the bomb dump, bomb up the aircraft, pre-flight them, then wait until take off time. On night shift (6pm to 6am), it was usually around 3am. Day shift flights were generally staggered between 6am and 10am. After that, was the 'after flight' things; fixing any issues, then start the next round. We used bombs supplied by the USAF (after all the WWII surplus bombs were used up). These were an M117 bomb and although weighing 750lbs, were fairly easy to throw around, if you knew how. Between the hangar and the flight line, there was a sand bag bunker for us to huddle in if there was incoming mortars or rockets. The building beside the bunker is the hangar and the armoury is on the top floor, nearest the bunker.

The picture below is of the start of a bombing mission. As the weather was hot and humid most of the time, the aircraft had cockpit covers to shield from the sun, and we had mobile air conditioners (as seen in this photo with the flexible tube from the unit into the cockpit) in an effort to keep as cool as possible. The cockpits would get extremely hot and it was impossible to sit or work inside the aircraft without an air conditioner unit. When the pilot was ready to taxi out, we would remove the air conditioner 'donkey dick' (as it was called), close the cockpit door, and at the very last, remove the cover.

We went into Phan Rang city quite a few times as we were building a nursery at the local Catholic compound (our padre was a Catholic priest), and during these times, we were shot at regularly. It was a strange war; we had to be shot at, before we could shoot back. It was called a 'police action', typical of politicians. This is a picture of the finished nursery we built at Tan Tai where the compound was.. Paddy was the driver behind the building of the nursery at the orphanage. During the build of this nursery (foreign aid funded), we would go into Tan Tai, a 'suburb' of Phan Rang in a 6x6 truck and work all day on the build. We used to get shot at quite often; I don't think the shots were intended to kill, just scare us, but, as I always carried an old WWII Owen gun and a 9mm pistol, I always played the part of the 'guard'. My job was to raise the alarm if I believed we were to be attacked. One day, a noggie (word used for a Vietnamese) rode a pushbike down the street as I was in front of the orphanage, and he had two AK47 rifles and two bandoliers of ammunition over his shoulders. I knew he was a VC (Viet Cong) and he knew who I was. If he had got off his bike and shot at me, I could have returned fire, but he just rode past, knowing I couldn't do anything, and gave me the dirtiest look I have ever seen from a man. I thought we were in for trouble, so I made the others aware, but nothing happened over the next half hour, so we resumed the build. The tension that sort of thing creates in a person is hard to deal with. We were on their turf!

The armoury was much more interesting than the flight line. I kept all the squadron's small arms in a serviceable condition, was responsible for the NATO ammunition usage returns every month, and did all the local demolitions required. We had to account for ammunition and explosives used (probably so the yanks could boast). Keeping a track of this was easy enough, but our usage was high (in my view). I also assisted MACV (USAF Military Assistance Command, Vietnam) to do some forensic work on and off the base. If (say) the Catholic compound at Tan Tai was attacked, my job was to identify the ammunition used (by digging the bullets out of walls, etc) and determining what sort of weapon fired them. From that it was fairly easy to identify the perpetrators. I really enjoyed this work.

One day I had a call from the air crew briefing room to come over right away. This room was on the second floor of the HQ building, and downstairs was pay section. When I got there, all the officers were in a flap and in the room where the air crew lockers were, there was a nice neat 9mm hole in the floor. One of the air crew, while removing his flying gear, had discharged his

9mm pistol. It took an LAC, me, to bring some calm. Of course, the pilot said it went off by itself, but of course, it didn't. So, out to the practice range for you, sonny. I ran all the range practice shoots for the Squadron, and had some fun with these pilots and navigators. Just next to the armoury on the same floor, was the office of the Senior Engineering Officer, one SQNLDR Archie Javes. One day while in the armoury, I heard a shot and guessed it was from Javes' office. So I quickly ran into his office and found him, standing there, pistol in hand, shaking like a leaf. I cautiously took the pistol from him, told him to sit down, made the weapon safe, then said, "Ok now, what happened?" By then, others were at the door, so I had witnesses. L-Group (clothing store) was underneath and they weren't impressed, but no one was hit.

As I held the range practices for all ranks, I was the boss, irrespective of rank. Every person had to have regular range weapons practices so these were quite interesting. It is quite amazing just how inept some people become when handling a pistol or rifle. One day I was running a regular office practice and had (again) gone through how NOT to fire a pistol. The standard issue was a Browning 9mm Hi-power. Like all pistols, the weapon is a single action, semi-automatic handgun, 13 shot. This weapon is slide operated and one 'no-no' was to hold your pistol with one hand over the other. The reason is that when you fire a shot, the pistol ejects the spent cartridge and reloads. To do this, the slide moves back and forward again. If you hold and fire the gun with one hand over the other (for stability), the slide takes two large chunks of flesh off your hand between your thumb and forefinger. One day on a range shoot, a very clever (and young) pilot officer used this technique (after the usual instruction) resulting in damage to his hand. The issue is not the damage to the hand, it is a person now injured, waving a loaded pistol around like a drunkard. As I could see what was happening, I grabbed his pistol hand and held his hand as high as I could effectively aiming the pistol at the sky. I didn't want anyone to get shot by an idiot on my range. Needless to say, he didn't like what I was doing, because he was in pain and blood was running out of his wounds. He changed his attitude after that incident. Some lowly LACs actually know what they are doing!

I also did all the demolitions for 2 SQN and I at times, combined this with training sessions I ran for one of the American Air Cavalry units who had asked me to run small demolitions courses for them. I used the same shooting range as for the practices, but my job was to demonstrate what to do and how to deal with unexploded ordnance found lying around (there was quite a lot!) On one such course, I was blowing up a box full of unwanted ammunition (found all over the place) and I was showing a group of Americans how it was done. I set up the charge using plastic explosive (directional shot), a primer and a detonator with two feet of blue sump fuse. This fuse burns at the rate of one foot in 30 seconds, so two feet was one minute. Before I lit the fuse, I told them NOT to run away from the charge, just walk. The reason is that if you fall over and break your leg, I am not going to stop and help. So, I lit the fuse, took note of the time and off they ran. I walked back to the sandbags slowly and made sure I was the last back, then started a countdown. The charge went off exactly on zero (as I knew it would). Then came the lecture!

On Wednesdays, I went flying with the 310th Air Commando squadron (C-123s), specifically, the 19th Special Operations Squadron, which was located across the airstrip from us. A crew van would come for us (several of us used to do this, but on separate days) at 4am, and we would attend the 4:30am crew briefing. The arrangement 2 SQN had was that we couldn't be off-loaded (must stay with the aircraft we had been assigned to for the day) and must return to Phan Rang that evening. It was with the approval of the Squadron CO (Dave Evans at the time). At the 310th, after the briefing, we would go to the assigned aircraft, pre-flight it, and then take off to wherever we had to go. In this manner, I got around Vietnam quite a lot and saw many bases and airstrips that I can't remember now. Every Wednesday, I flew with the same crew. This was quite an experience as I got to see the 'real' countryside of Vietnam and went to some interesting

places. Dalat was one. The temperature on the tarmac at Cam Ranh Bay base was well over 100°F and at the strip at Dalat it was a beautiful 70°F. That day we flew Cam Ranh - Dalat about 12 times. The distance is about 80 kilometres. One day, we flew to Cao Lanh on the Mekong River in the Plain of Reeds, an inland wetland in the Mekong Delta which was a rice producing area. One end of the strip was the Mekong river and the other end of the strip was a paddy field. In fact, the strip was the main street of the town. We dropped off a fuel bladder and a forklift and picked up some pax (passengers). I won't forget these guys; both USAF, both obviously shell-shocked, fully clad in their flak jackets, holding their weapons very tightly, and very quiet. Our next stop was Tan Son Nhat (Saigon) and they seemed to relax a bit as we landed.

The flak jackets mentioned were issued to all of us, and we were supposed to wear them as it was body armour. No one could endure wearing these for any length of time as it was so hot there, and the jackets weighed in at over 10 pounds (about 5 kilos). One time we landed at Binh Thuy Air Base which was shared by the USAF and the South Vietnamese Air Force. We had landed, loaded up and on take-off, lost an engine, so we went around and landed again. While unloading, I went across the tarmac to see some old propeller driven fighters (SVN). While walking around, a jeep at pretty high speed came up and stopped. A guy got out and asked me "what are you?" Apparently, they had seen me from the tower and sent these guys to find out who I was. After explaining, they left. When we got airborne again, we had to return to Phan Rang so we flew out over the ocean, around the coast to Phan Rang. This was an amazing flight. We passed over part of the US 7th Fleet, the battleship USS NEW JERSEY. It was a grandstand view from 8000 feet.

Rest in Country (RIC) was a term for a break from the day to day operations. For my 'rest in country', I went across to Malaya (Penang) where the RAAF (and the RAF) had a presence. We stayed in the RAAF Club in Penang which was a really nice place. The time off in Malaya is a bit of a blur as it's been a long time. For me, it was good to get away from Vietnam for a few days. Also, each person was entitled to one Rest and Recreation (R&R) during their tour. There were many places we could go: Malaya, Singapore, Hong Kong, Taiwan, Australia, Tokyo. Surprisingly, North Vietnam was off limits. I chose to go to Hong Kong. What a place! When going on R&R, we were considered part of the US Military and therefore had to obey their rules. I stayed in Kowloon at a hotel called "August Moon" on 25 Kimberley Road, Kowloon. In reality, I only slept there. Most of the time was out and about (lots to see), and catching up with Deane, a Sydney girl I met in Phan Rang who was with the USO (United Service Organisation) as an entertainer. They had done a show at Phan Rang, so I met up with her in Hong Kong. One thing she showed me was the bars where entertainers would go after their shows for relaxation. These bars were great with great professional music and no one wanting to annoy you. These bars opened at 2am, so by about 5am, I was back to my hotel for some sleep.

I returned to Vietnam on a Pan American Clipper (707) to Cam Ranh Bay where there was a HUGE joint US Air Force and Navy base. The USAF had what they called "Aerial Ports" which were the 'passenger' terminals for people travelling internally in Vietnam. When I got to the Aerial Port, there were about 1000 people (all services) waiting for a ride somewhere. I got in

the queue and when it was my time, they said there was a two day wait for a flight. Not very happy with this, I watched the flight line for any C-123s with Phan Rang markings. After about an hour, one taxied up and stopped about 200 yards away. I said to the two guards on the tarmac, that that plane was my unit and could I go to see them. They said ok, so I nearly ran across to them and asked for a lift to Phan Rang. As it happened, I knew them (19th Special Operations Sqn) so they said jump on board. About an hour later, I was back in my hooch at Phan Rang. The guys at the Aerial Port are probably still looking for me.

As an extra-curricular activity, I also became a gun runner, but with a difference. Usually, gun running is to supply in order to profit or to aid and abet the enemy, however, I became a supplier of weapons to any friendly force person who wanted something different or better. This came about because the Americans were issued with AR15 assault rifles, which had a very bad reputation and were very unreliable, so there was the market. I used to buy from MACV, and sell to 'clients' who could be Americans or Australians. After the CO's edict of 'no private weapons' was issued, the business became a whole lot better, but more secretive. We always obey orders! One day, I got a call from the Service Police SNCO to come to his office. I thought someone had ratted on me, but after arriving, and he shut the door, asked if I could help him assemble an M1 sniper rifle (that he obtained elsewhere). There is a trick to the M1, so for a fee, I showed him, and also was able to supply some ammunition. There was also a trick to loading this weapon without it taking a large piece of your thumb.

I left Phan Rang on 28 Feb 1969, medical evacuation to 3 RAAF Hospital in Richmond RAAF Base, NSW. I had hurt my back throwing around a 750lb bomb on the back of a semi-trailer (normal bomb trolleys were unavailable). At 3 RAAF Hospital, they wanted to operate on my back, but I would not let them, simply because my father, who had broken his back twice in his work, told me not to let anyone touch my back (they don't know what they are doing). After some lectures by the medical people, I was then posted to 3AD again and left the Air Force on the 8th March 1970.

Of interest is the fact that the English Electric Canberra (the aircraft we used), was 20 years old and an obsolete aircraft when it was sent to Vietnam, and our unit, using these old aircraft, had excellent results. In all honesty, my experience in Vietnam was good. I got around the whole country, saw lots of air bases, and generally had a great time, except for the nights: nights were no fun. It was a war of attrition. They knew they couldn't beat us outright, so they used tactics that won in the end. We always celebrate wars we lose!!

This picture was taken of the whole squadron on the tarmac just outside the hangar at Phan Rang Air Base, in South Vietnam. I am indicated by the arrow

Night Bombing Mission

From Grant McCormick

The year was 1968 and the TET offensive was in full swing! I was an armourer based in Phan Rang with the Canberra bombers. I had counted myself lucky to be able to go on a bombing mission at night over Hanoi!

This required me to go to the base armoury where another armourer, Jon Fallows, fitted me out with a flight suit, a helmet and oxygen mask, a parachute, a 9mm pistol and ammunition. As I walked out to the Canberra, I had a feeling of excitement laced with an amount of trepidation!

RAAF 2 Squadron Canberra bomber just prior to engine start up at Phan Rang air base, Vietnam.

The pilot and navigator climbed into their respective ejection seats and I then sat on a small fold down aluminium seat next to the pilot. The pilot started the two Rolls Royce Avon engines and we made our way out to the runway to line up for take-off. After going through his take-off checks, he wound up both engines and we hurtled down the runway and leaped into the night sky! What an experience for an airman who had only travelled in planes like an American C123, an Australian Dakota and a C130 Hercules. The thrust, with a full bomb load was incredible!

After we arrived at our cruising altitude of 30,000 feet the pilot pointed to the door next to me and said "You know above 350 knots you can't get out of that door due to the slipstream…". My reply was "what speed are we doing?" His reply was "500 knots!" He let that sink in and then said "If you hear a large BANG and feel a sudden rush of wind, the plane is yours, I'm gone!"

About now I was starting to feel that this joy flight, in a bomber, on a mission at night, perhaps was not such a great idea?? Well, we hit two sampans, full of explosives from 30,000 feet, directed by radar from Saigon, being given 5, 4, 3, 2, 1, drop!! Not bad hey! It was a demonstration of why the Canberra's and our flight crews, had a much higher accuracy record than the Americans.

Back home safely, with a barrel roll on the way to break the monotony! A night I will never forget!!

More Than One Way to Skin a Cat

From Richard Bomball

The Malayan Emergency began in 1948 and continued until the end of 1960. The RAAF's contribution to Britain's Far East Air Force began in the 1950s with DC-3s and Lincoln bombers, progressing to Canberra bombers in 1955 with the upgrading of Butterworth. Sabres came late to the party with No 3 SQN deploying to Butterworth in November 1958 and 77 SQN following in February 1959 - Operation SABRE FERRY Phases 1 and 2. My involvement was as a very junior member of 77 SQN. Operation SABRE FERRY is itself an interesting story, but perhaps for another time.

The air role in Malaya was to support the Commonwealth ground forces in their operations against the Communist Terrorists. Up until our arrival, the RAAF role had been undertaken successively by the Lincolns and Canberras. The air element of the campaign involved classic close air support of ground troops operating covertly in the jungle to locate insurgent camps. Once located, air support would be called in to bomb relative to smoke markers dropped by a British Auster aircraft, the aim being to either destroy and/or panic the insurgents to break cover and expose themselves to ground fire, a big ask in thick jungle.

77SQN Sabres lined up at Butterworth, 1960

Some time passed following our arrival before the operational planners could be convinced that dive bombing from Sabres might be at least as good an option as level bombing from Canberras. Finally, in August 1959 we undertook our first strike. However, the steadily increasing success of the campaign coupled with the need to share the strike opportunities between the Canberra squadron and two Sabre squadrons meant that our involvement was fairly limited.

0ur last strike occurred less than a year later in June 1960 and it is that mission that sticks in my memory as very unusual, in that no live weapons could be used due to the proximity of the insurgents to a civilian settlement. The 'strike' force involved Sabres at high level, their job being to lay sonic booms on the target area at the appointed time. Sabres at low level were to simulate strafing, accompanied by loud recordings of bombing and strafing broadcast by the Auster Mark aircraft.

At the appointed time the Auster Mark dropped his smoke marker then all hell broke loose! Sonic booms rained down from high altitude. The Auster Mark pilot turned on his broadcast of strafing and bombing while the low level 'strike' aircraft simulated strafing attacks.

RAF Auster

Although not a shot was fired, the ruse worked a treat. The CTs broke cover and began running toward a ground force of highly disciplined Gurkha troops led by a British officer. Unfortunately, the Brit officer's gun jammed and the Gurkhas didn't dare fire without his lead, thus allowing the terrorists to melt unharmed into the jungle. Nevertheless, it was a very interesting example of what air power can achieve with some lateral thinking, albeit in somewhat unique circumstances.

The British had realised for some time that the Emergency was a war of hearts and minds and had painstakingly used ground and air forces to drive the insurgents back toward the Thai border, while securing the Malay villages as safe refuges by night and escorting the villagers out to work the rubber plantations by day, gradually denying more and more of the country to the insurgents and denying any opportunity to inflict terror. The strategy worked, bringing an end to the Emergency in late 1960.

Yesterday's Caribou Meets Today's Spartan

25 October 2023

From www.Defence.Gov.Au/News-Events, by Flight Lieutenant Karyn Markwell

A DHC-4 Caribou aircraft, left, sits beside a C-27J Spartan aircraft from 35 Squadron at RAAF Base Amberley, Queensland.

Photo: Flight Lieutenant Karyn Markwell

In a unique event, historical aircraft DHC-4 Caribou A4-236 was displayed beside a C-27J Spartan from 35 Squadron during a family day at RAAF Base Amberley on October 21. Commanding Officer 35 Squadron, Wing Commander David Torrington, said involving the

Caribou in the event presented an opportunity to educate the workforce on the role it played in Air Force's history. "A significant portion of 35 Squadron's history involved flying the Caribou in Vietnam and so we thought it was important to acknowledge that history," Wing Commander Torrington said. "We wanted to make our family day as engaging as possible by involving as much of 35 Squadron as possible, both past and present."

Caribou A4-236 began its Air Force career in 1965. After the Vietnam War, it served with 38 Squadron on humanitarian aid and disaster relief operations in NSW in 1990, Timor-Leste (East Timor) in 1999 and Solomon Islands from 2003 to 2004.

History and Heritage – Air Force restored Caribou A4-236 in 2021–22. The aircraft is usually on display at the Amberley Aviation Heritage Centre. Director General History and Heritage – Air Force Air Commodore Robert Lawson said they were pleased to have provided the Caribou for display with the Spartans for the 35 Squadron event. "Displaying the two aircraft types together marks a proud tradition of hard work and operational effectiveness, which continues today with the C-27J Spartan," Air Commodore Lawson said.

Air Force operated 29 Caribou aircraft between 1964 and 2009. They were greatly valued as a flexible air mobility aircraft capable of airdrop, airlift and operating from improvised and unsurfaced runways – just like today's Spartans.

Personnel from 35 Squadron welcomed about 600 family members and friends on their family day, with around 200 experiencing a flight in a Spartan.

Australia waves its last AP-3C Orions into Retirement

From Flight Global, by Craig Hoyle, 7 December 2023

The Royal Australian Air Force (RAAF) has ended operations with the Lockheed Martin AP-3C Orion, with its final two examples having left service in early December.

Source: Commonwealth of Australia

Operated by 10 SQN from RAAF Base Edinburgh in South Australia, the pair had been employed in the intelligence, surveillance and reconnaissance and electronic warfare (ISREW) roles.

Cirium fleets data shows that the retired aircraft – A9-657 and A9-660 – entered service in 1985 configured for maritime patrol duties, before later being modified to the EW standard.
The RAAF's maritime patrol-tasked AP-3Cs were replaced in service by Boeing 737NG-based P-8A Poseidons, with remotely piloted Northrop Grumman MQ-4C Tritons also being acquired.

Australia launched operations with the four-engined Orion in 1968, originally fielding P-3Bs, followed by C-model aircraft from 1978. The enhanced AP-3C standard entered use in 2002.

Source: Commonwealth of Australia

Cirium data shows that the global military fleet of P-3s has been reduced to just over 140 examples, with these used by 12 nations; as detailed in our 2024 World Air Forces directory. It also lists another 21 as flown by operators including NASA and US Customs and Border Protection.

Air Force Returns to Tocumwal

From www.defence.gov.au/news-events, by Flying Officer Kristi Adam, 4 October 2023

The Air Force returned to the site of its largest base during World War II, to support the annual Tocumwal Airshow, held in September. During the event, 100 Squadron entertained in the air, while the virtual flight simulator provided excitement on the ground.

Capturing the history of Air Force in Tocumwal, former Air Force aviator Matt Henderson and his wife Karen established the Tocumwal Aviation Museum and have been drawing thousands to the town each year through the growing Tocumwal Airshow. This year was the biggest and best yet, according to Commanding Officer 100 Squadron, Wing Commander Jason Easthope, who flew the Commonwealth Aircraft Corporation CA-18 Mustang at the air show. "The event is a fabulous opportunity for Air Force and broader Defence to engage with a public gathering that is clearly passionate about aviation," Wing Commander Easthope said.

Historic aircraft from 100 Squadron prepare to take part in flying displays at the 2023 Tocumwal Airshow.
Photo by Flying Officer Kristi Adam

"100 Squadron was in its element, showcasing a sample of Air Force's precious heritage aircraft, with six aircraft flown in from Temora and Point Cook that conducted a mix of handling, aerobatic and formation displays. "It was a really big weekend for 100 Squadron, with the Temora Aviation Museum showcase on Saturday, then Tocumwal on Sunday [September 17]. Seeing so many people enjoy the displays makes all the planning and logistics worth it."

Airshow attendees also had the opportunity to experience Air Force aviation first hand, through the F/A-18 virtual flight simulator in a mock ejection seat. This formed part of the Aviation Motivation Program, which aims to increase awareness and develop interest in Air Force aviation careers. The simulator was run by Warrant Officer Adam Futcher from the Aviation Candidate Management Centre. "The simulators had a constant line of people throughout the day wanting to have a fly in a fast jet, and an opportunity to engage with Air Force personnel like Pilot Officers James Nelson and Stephanie Dalton," Warrant Officer Futcher said. "They have both recently gone through the officer aviation candidate selection process, providing a great resource to those who had an interest in a future Air Force career, or who had questions regarding the lifestyle, recruitment and selection processes – all in a fun-filled, relaxed environment." Pilot Officers Nelson and Dalton have been part of the team conducting roadshows across Australia, visiting schools, Air Force

Pilot Officer Stephanie Dalton, of the Aviation Candidate Management Centre, guides Tocumwal Airshow attendee, Ben, on an F/A-18F Super Hornet virtual reality simulator.
Photo by Flying Officer Kristi Adam

Cadet squadrons, air shows and various public events prior to commencing pilot training at the Air Academy at RAAF Base East Sale.

Operation Vittles

By Tomas "Paddy" Hamilton, 3 Nov 2023

The people cowered in silence, when they heard the red bear's roar
Berlin lay in ruins, but the Russians wanted more
The bombings may have ceased, as a cold war took its place
Mankind dreamed up novel ways, to threaten the human race

Ivan was convinced, a blockade would succeed
Two million Germans, deprived of every need
With access denied, they were left in little doubt
The city would soon starve, there was no way in or out

There was still a chance, although a mighty dare
The only solution, was to bring everything in by air
Yorks, Daks, and DC-4s carved a highway across the sky
The task seemed impossible, all they could do was try

Ice, snow and pouring rain, made every trip a feat
But the allies were up for it, they would never face defeat
Victory often comes, at too great a cost
Of all those who took part, over a hundred men were lost

When the blockade lifted, freedom saved the day
Though a hundred aircrew died, the bully did not have his way
Those heroes are remembered, as those who played a role
Two minutes silence, for those who paid the toll

On a distant Berlin airfield, you find an Aussie Dakota
When it came to airlift, it surpassed the quota
The aircrew have long since passed and crews in friendly air
Reflecting on the past and the solace they now find there

Impressions of Wagga Wagga

From Henry Whittaker, former Metal Machinist, ASTFITT and EDO

In contrast to Adelaide, Wagga had a slightly more vibrant feel to it. Being almost midway between Sydney and Melbourne meant that you could get away from the place for a break on weekends. It had a fairly constant population of around 55,000 and enjoyed the fortunate situation of having two military bases and a university in its local government area. It was also a centre for local finance, small manufacturing in support of transport and agriculture, business and retail. It would be fair to say Wagga was the region's 'Big Smoke'.

So, this high turnover in transient population meant that Wagga town was able to maintain a viable pool of DNA to constantly renew itself, which meant it had a certain vitality that Adelaide did not - Wagga citizens had all their own teeth. However, that could not be said of the outlying towns, villages and hamlets. These 'outliers' were places local civilians used to make jokes about. And after spending a while in Wagga, I got to understand why. If your taste in partners included those with a, 'hare lip, teeth like an oyster lease at low tide and, one eye that wouldn't stop looking at the other', then you were in for a treat. We RAAFies used to make jokes about our

Tasmanian colleagues but, I never once saw any of our guys with 'interesting features' if one were cruel enough to associate it with being, 'all in the family'.

My first time in Wagga was as an Adult Trainee on my first trade course - Metal Machinist 1986-87. The second time was a re-muster in 1991 - 1992 to ASTFITT and the third time I was on staff as an EDO 2008 - 2011. It's actually quite complimentary to Wagga when compared to my impressions of Adelaide in the mid-1980s ... which in turn is quite generous in comparison to my observations of and experience with EDOs...!

5EFTS Memorial

From Geoff Kubank

On Fri 13 Oct, three Tiger Moths from Luskintyre in the Hunter Valley flew to Narromine NSW to take part in the unveiling of the 5 EFTS (Elementary Flying Training School) memorial wall, a memorial to the almost 3000 trainees who received their initial instruction at 5EFTS during WWII. The unveiling was performed by Air Chief Marshal (Ret'd) Sir Angus Houston, AK, AFC.

The three Tigers each made three passes over the wall a few minutes before the ceremony began, much to the surprise of many of the 100 or so attendees. Reports afterwards indicate that the flyover was very well received.

The Fighter Squadrons Branch of the RAAF Association NSW generously supported the Tiger Moths with funding to cover the fuel costs.

RAAF C-130 Hercules in Antarctica

From Tony Ryan

1978 was a significant year in the life of No 36 Squadron, RAAF. As Flight Engineer Leader, I was responsible for the training and conversion of our squadron flight engineers to the new C-130H models, the first of which we brought home on 28th July 1978. In preparation for this task, I and two other C-130A Flight Engineers, SGTs Max Lollback and Bill De Boer, were attached to 37 Squadron in late 1977 to convert to the C-130E. This was thought desirable as the C-130E was much more like the C-130H in its various systems.

We operated the C-130E and formulated a conversion scheme to train all our fellow C-130A Flight Engineers on the C-130H. This task was not without its difficulties. The publications for the C-130H model in RAAF service were 'tailor made' specifically for our twelve examples of the type, and they were not going to be available until we took delivery of our aircraft. This led to us 'borrowing' Flight Manuals from the Royal Malaysian Air Force, which already had H models in operation. Despite the difficulties, we were able to introduce the new H model into service during the third quarter of 1978 and thus retire our tried-and-true C-130As.

The C-130H model was a quantum leap from the C-130A, having much more powerful engines, superior electrical and hydraulic systems, underfloor heating, upgraded cockpit air conditioning, an improved weather radar, Inertial Navigation System (INS), and much more modern avionics and autopilot/flight instrumentation. Hamilton Standard 13'6'' diameter four blade props replaced the Aeroproducts 15' diameter three blade prop on the C-130A. Better synchronising/synchrophasing and smaller diameter props meant a reduction in noise. Also, as for the C-130E model, the C-130H was able to operate at much higher weights; 155,000 lb Mean Take Off Weight (MTOW) (with an Emergency MTOW of 175,000 lbs) against the 124,200 lbs MTOW of the C-130A. Whilst all of us who operated the C-130A in the tactical environment loved the aircraft, the C-130H was a very much different and improved aircraft.

Digging our accommodation before fitting the roof

During November of 1978, we flew A97-005 to Christchurch. Three complete crews were then flown to McMurdo Base in Antarctica where we were housed whilst we undertook an Antarctic Survival Course, courtesy of the New Zealand contingent based at Scott Base. This involved a number of lectures on survival aspects, followed by 48 hours out on the snow constructing our shelters, crevasse avoidance exercises and climbing ice formations, all in 24 hour a day sunlight.

Following this training two complete crews returned to Christchurch and the crew of which I was a member, remained on the ice to await the arrival of our aircraft from Christchurch. This event took place on 1st December 1978, marking the first time a RAAF C-130 had landed on Antarctica. The runway was on the frozen Ross Sea which was used until such time as the "thaw" reduced the thickness of the ice to a point

where it was considered unsafe to continue to use. A runway on the permanent ice shelf would then be cleared and used.

This was, in many ways, a highlight of my personal career with the RAAF and on the C-130 Hercules. The C-130 is, and always has been, a most versatile aircraft which has been operated by over seventy countries worldwide. I enlisted in the RAAF on 18 Feb1958 and the first RAAF C-130A, A97-205, arrived in Australia during November 1958. Still in production, it seems the C-130 will be part of the military aviation scene for many years to come. The RAAF has just ordered 20 more C-130J-30 Super Hercules. A testament to the aircraft, maintainers and the crews, the RAAF has operated 48 individual examples and has not lost one. Sadly, the aircraft we operated into Antarctica in 1978, A97-005, is no more. She was one of those gifted to the Indonesians and was destroyed when flown into the side of a mountain some months after entering service in Indonesia.

Posing behind our sign in front of our snow trench "donga".