

One Man's Flying

Learning to Fly and Service Life

The older I get the more appalled I am at how ignorant I was of things mechanical and aeronautical when I learnt to fly with the RAAF during the Second World War.

Pre-war suburban Brisbane was not renowned for the number of car owners or even motorbikes for that matter. All my friends and I knew about machines amounted to the workings of alarm clocks, door locks and bicycles. We vaguely knew internal combustion moved vehicles, and the nearest we got to aircraft was when one occasionally flew over the city.

So armed with all this knowledge young Ted went to learn how to fly.

My first flight was called Air Experience. Clothed in a parachute and something like a sleeping bag, covered by a heavy, rubber lined flying suit, huge leather gauntlets, helmet, goggles and fur lined boots my instructor introduced me to a Tiger Moth. He particularly stressed that while entering and leaving the aircraft it was necessary to walk on the catwalk over the wing otherwise ones foot would pierce the covering of the wing. Penalty for missing the catwalk was to be cursed forever in this world and the next.

The flight was uneventful. I recall how I had the feeling that I could walk safely out on the wing due to the apparent slow momentum through the air relative to the ground when at height.

After we taxied in, my instructor shut down the engine and I climbed out of the cockpit and put my beautiful, wool lined boot straight through the fabric on the wing. I have never before or since been sworn at the way that the instructor verbally ripped me apart. My ancestors, self and decedents were mentioned as outcasts of society, the manner of my birth was somewhat in doubt and I would very much have preferred the damnation originally mentioned as punishment for such a sin. I distinctively recall that I thought, at that moment, that my flying career had been good but short. I presume others must have done what I did for I was reluctantly allowed to continue flying training.

As our flying hours started to mount we naturally discussed the day's events in the hut after dinner. One fellow, who had all of twelve hours up, proudly told us he had looped-the-loop solo. The confidence of the rest of us was shattered. It just seemed impossible to us that we would ever be brave or capable enough to loop a Tiger Moth. I now take a little comfort in the realisation that he either did a very big loop, frightening the hell out of himself, or he was a liar. The majority of us eventually passed our initial Flying Training Tests.

Wirraway



Role	Trainer /general purpose
Manufacturer	Commonwealth Aircraft Corporation
First flight	1937 (see Development)
Introduction	1939
Retired	1959
Primary users	Royal Australian Air Force Royal Australian Navy
Produced	1939–1946
Number built	755
Developed from	North American NA-16
Variants	CAC Boomerang

The Wirraway cockpit was built for pilots 6'6" tall and as I couldn't reach the rudder pedals without back cushions and wooden blocks on the pedals, it was decreed I should be trained for bombers. I later learned that the Wirraway had a serious wing tip stall, which usually manifested itself during a bad landing, and I now believe my instructor recommended my bomber posting mainly due to compassion for human life.

Avro Anson



A restored Avro Anson Mk I in flight

Role	Multirole aircraft, primarily a trainer
Manufacturer	Avro
First flight	24 March 1935
Introduction	1936
Retired	28 June 1968 (RAF)
Primary users	Royal Air Force Fleet Air Arm
Produced	1930s-1952
Number built	11,020

The Anson was huge compared to a Tiger Moth, had two engines and a manually retracting undercarriage. It also had a door at the back entered from ground level and therefore immune to foot damage. Discipline had been tight during Tiger flying, but relaxed somewhat on the Ansons as we were now becoming senior Trainee Airmen. As trainee airmen we were distinguished from ground crew by wearing a white piece of cloth inserted in our cap. It seems that the ground crew at Initial Training School who were permanently stationed there had spread the story in town that the white cloth in the cap indicated a V.D victim. Consequently our local leave periods were devoid of feminine company.

So with a combination of less discipline, and more knowledgeable young ladies near the Anson camp we were able to indulge in a little of what is called living. Yes, we even went to dances. Some of us showed individual traits, such as making bombs out of Vercy cartridges just for fun, resulting in the whole camp being refused leave till the mad bomber was found. All in all our Anson days were very agreeable.

The camp was situated near a river and occasionally at night a fog would roll off the river and cover the airfield. One night when we were practicing night flying that fog rolled in and caught four trainees in the air solo. One attempted to land through the fog, missed and landed in the fuel dump, started an inferno, was rescued by a flying controller and had a lovely fortnight in convalescent camp at Surfer's Paradise. Another landed safely at a satellite airfield with no ground lights and was hero thereafter, because most of us had trouble landing in that very small paddock in broad daylight. Tiny Kerr, later to become a close friend, landed on a broad strip of sand on the coast. Next morning as the tide rose Tiny was debating whether to hang on to the top of the tail to which he was clinging or face the sharks in a swim for land, when a fisherman rowed by and asked him what the hell he was doing? The fourth pilot landed wheels down on the beach. Next morning he started the engines and flew home. Starting was no mean feat. He used sticks to actuate the high tension mechanism in the cabin while he wound the engines outside with a crank handle.

At the end of advanced flying training we were awarded our wings. After many months of engine, airframe, radio, armament, electrical etc. lectures, at last we were getting a smattering of things mechanical and technical and were ready and eager to fight the enemy wherever we might find him in the air. I can only assume that the German and Japanese pilots were just as naive.

I applied to fly twin-engine fighters and was posted to a Beaufighter Torpedo training squadron. On arrival the squadron was disbanded and I spent a few months as a staff pilot at an air navigation school on the NSW coast. One evening I was Orderly Sergeant and instructed to gather the entire inmates of the sergeant's mess and get them to the tarmac to push our aircraft into the hangers as a big storm was forecast. Now to ask Australian Sergeants who had been in the mess for a couple of hours to do anything except drink some more would have taken the personal approach of the King, Churchill and the Prime Minister of Australia combined to achieve any result.

Some guile was called for in the form of patriotism. I conned a friend to stand at the back of the crowd and at the required moment to shout "it's the Japs". I banged for silence, requested the gathering to proceed to the tarmac, heard my friend say his piece and awaited results. It worked like magic. The aircraft were put away quite sometime before it had occurred to me or anyone else, that if the Japs were coming, perhaps we should have pushed the aircraft into the air and not out of it.

One of our aircraft had forced landed at a remote airfield into south central Queensland. I was delegated to fly in two mechanics and another engine, send the crew of the unserviceable aircraft back in mine, and then return in the original aircraft when it was fixed. Whilst waiting for this aircraft I really sharpened my snooker playing in the town's billiard parlour, the only form of entertainment apart from the pub. A couple of bushies were playing as I entered and as they didn't look so hot at it I readily accepted a game for 10 bob. I won of course and the next game was for 2 pounds. I lost of course but I was a bit wiser. Finally I returned to base, was congratulated by the squadron commander for a job well done, and to this day I don't know why. It was the mechanics who did the good job. This base also contained our Air Gunnery Training School flying Fairey Battles. Occasionally a pilot in a Battle would fly too low and come to grief with an innocent air gunner burnt to death with him. Things like this reminded us that living was a serious business.

Overseas

I was next posted to England. Heavy losses were expected among our aircrew as the Allied air offences built up in Europe, and we were to be the replacements. At last a chance to get into the war. We had read about it, been trained for it, been lectured by prominent RAF and RAAF aces and were ready, willing and as we thought, able. It never occurred to us that we would be replacing prisoners of war and injured and dead pilots. The enthusiasm of youth, the glamour of flying, the pride of achieving our wings which was unthinkable 18 months earlier, pushed us towards a war we thought we totally understood, but in reality knew nothing about. Presumably the ranks of the Navy and Army were filled for similar reasons. We weren't fighting to save civilisation, we merely wanted to be heroes. I know a lot a lot of people fought for ideological reasons, intellectually thought out and coolly accepted. Not us, if it incidentally saved the world, so much the better. Our selfishness and arrogance should have been repugnant to many people, yet we were accepted by all we met because we unconsciously falsified our motives, particularly to the innocent people who genuinely fought for God, King and Country. The civilian population of England accepted us for our youth and brashness and knew damn well if we did meet the enemy we would die and what a shame. We knew nothing of the suffering of Poland and other occupied lands.

It is interesting to contemplate today, some 40 years later, how youth would react to another world war, or even a local one threatening Australia. I believe they would

rally. As for foreign adventures such as Vietnam, they never did attract us and would do so even less with today's politically suspicious young people.

We travelled through America to England. The entire trip was a picnic. On arrival in New York I was detailed to guard our huts while the others went on leave. The reason for this was because somehow I was the only one to avoid duties on the troop ship, a feat of which I was proud until guard duty came up in New York. I forgot that authority never forgets.

Across the Atlantic in the Queen Elizabeth, 500 Australian airmen and untold thousands of American troops. It was one glorious gambling ship. A game on every deck, a game in every corner. I lost of course.

Our first night in the Personnel Depot at Brighton was sleepless due to an air raid. This was war, but still not bad as no bombs dropped near us. Our stay was occupied with drill, guard duty, lectures and visits on the glorious downs behind Brighton. Theatres, dance halls and pubs were more than sufficient for our entertainment. We were billeted in the Grand and Metropole Hotels on the front, and every lunchtime two thousand Australians were entertained by an old gentleman with a squeaky voice called No Balls. He rendered in a shocking voice 'After the Ball was Over' and for his trouble was showered with pennies and half pennies. Some of the coins heated up before they were tossed and old No Balls got many a burnt finger, but also many a penny.

I was posted hither and thither in England, flying training on Oxfords, Commando courses in Whitley Bay, Bean Approach Schools, Technical Training Command flying Provosts and finally to a Squadron No. 459 - Australians just arrived from the Middle East to fly Wellingtons. The original squadron members went on leave and three weeks later the squadron was disbanded as the U boat menace was over.

That was the closest I got to becoming a hero. During our Provost flying the authorities decided we needed survival training. This consisted of dropping us off a covered lorry two at a time in unknown parts some 20 miles from the airfield. The idea was to find our way back without help from the local population. Most of us made it after only one night out, but two of our members one Tiny Kerr of Anson days and another, Whitman, a born leader of men, weren't back for a week. We were all getting anxious when they entered the Mess one night, covered in mud, a little affected by alcohol, and two dead chooks each hanging out of their battledress. Chook for dinner that night.

The next week was spent in an investigation of a complaint by a local farmer concerning the theft of some chickens. All the Australians were interrogated by an English Squadron Leader. When Whitman's turn arrived, he was asked if he knew anything about chickens. 'Chooks sir?' said Whitman. 'My uncle had 3000 of them in Australia'. 'Chickens Whitman, not chooks'. 'How did he kill them' asked the Squadron Leader. 'He hit 'em on the head with an axe sir!' said Whitman.

‘Didn’t he scientifically kill them by bending back their necks?’

AS.10 Oxford



Oxford II in flight over [Saskatchewan, Canada](#) in 1942

Role	Training aircraft
Manufacturer	Airspeed Ltd
First flight	19 June 1937
Primary user	Royal Air Force
Number built	8,586
Developed from	Airspeed Envoy
Variants	Airspeed Consul

No sir, he was in too much of a hurry’. They never caught anyone over the theft and as Whitman’s knowledge of fowls of any kind was nil, we think he could have outdone the Gestapo.

My memories of England always seem to be in the spring, and although I was there for 18 months I can only remember one snowstorm, although I must have flown through some. This is where I learnt of airframe icing. One of our fellows went missing one night in an Oxford in a training flight. He turned up next day, swore his altimeter read 2000 feet when he skidded along the ground, the aircraft disintegrating about him. He spent the night sleeping in the barn. We lost two other Oxfords on other nights apparently due to airplane icing.

VE day arrived, and England was one huge party. I was in it but early next morning I was called out to fly of course. It was the only time I have been sick in an aircraft.

I was on one of the first troop ships to go home, It contained the first Aussie prisoners of war to return from Germany. About the only highlight in their life in prison camp was the arrival of Red Cross parcels. Whilst the ship was moving through the Panama Canal, a local native was working inside a wire cage repairing the base of an electricity pylon. One of the ex-prisoners yelled 'are you getting any parcels mate?' It had us rolling on the deck.

I had 60 pounds to gamble with on the way home. After two days of two up I was broke!

Home at last and the Jap war nearly over. I applied to join the Occupation Forces and was told to be ready for discharge. So ended one would be hero war effort. I can only assume we won the war because Germany and Japan were more inefficient and stupid than we were.

I spent the first year of peace as a clerk in the audit office of the QLD Govt. Railways. The following year I matriculated to QLD University. Just after the results were announced the RAAF advertised for pilots in the first post war recruitment campaign. As I still wanted to fly I re-joined the RAAF.

I did a flying instructors course and spent two years instructing at Point Cook. This is where I really learnt to fly and I firmly believe that teaching smooths off the rough spots and keeps me on my toes. I enjoyed instructing and was happy to have my first pupil top of his course in flying.

One day one of my pupils who had just gone solo came in to land in a Tiger Moth, held off too high, and stalled straight into the deck in an extremely nose down attitude. He was unhurt, and in his report stated that when he realised he was going to stall he took the stall recovery action he had been taught. That is, stick forward to gain airspeed. This is the covert recovery action for a stall with enough altitude to avoid the Earth, but near the ground he should have opened the throttle and gone around again.

On another occasion, I was flying with a pupil and noticed another Tiger Moth spinning at a low altitude and finally striking the ground. The engine was thrown aside and the wings were somewhat twisted. To my surprise the pilot, a pupil, climbed out of the wreckage and surveyed the result apparently unharmed.

I landed nearby, told my pupil to stand by the wreck and flew the crash survivor back to base. He was in medical care within 15 minutes of crashing and was flying again next day. I received a mild reprimand for assuming he was fit enough to fly back with me from the accident.

The mess at Point Cook had a huge, 14 pointer, deer head adorning the wall some 12 feet above the fireplace. At times of celebration, usually late at night, men could prove their skill usually for money by climbing the mantle piece and mounting the mounted deer head. One Curly Bartlett, who weighed 15 stone, successfully completed this feat one night. A week later it was decided that the head should be removed for cleaning and it was discovered that only one small screw was retaining it. Curly was really close to riding that head all the way to the floor.

Another mess member, nicknamed Blue, after some hours at the bar, decided to square an old account. The victim had locked himself in his room but Blue operated a fire extinguisher through the keyhole. The outside of the door was a mess, but an astonishing amount of fire repellent entered the room. The man inside objected so loudly that the matter reached the ears of the Mess Committee who banned Blue from the use of the Mess bar facilities for three months. Undeterred, Blue wrote to a large number of liquor firms and received many of their sample wines. He was able to entertain lavishly in his room and ended with a very fine collection of miniature wine bottles.

In 1949, the RAAF called for applications for a test pilot course. I applied, and although only an N.C.O was accepted. This resulted in flying many types of aircraft and learning to assess aircraft performance and handling.

One of the pupils, Fred Rumdsen, was an expert Mustang pilot, and occasionally thrilled the airfield personnel by landing a Mustang off a slightly lopsided loop. One of the lessons we learnt was to measure the position error of the aircraft pilot head. This device measured the difference between static air pressure and the air pressure generated by the aircraft flying through the air and the result is read on an instrument in the cockpit as air speed. The pilot head is subject to minor errors, one due to where it is positioned on the aircraft. One method of finding this error is to fly the aircraft through a wide range of speeds past a tower which contains measuring devices. The tower readings are compared with aircraft readings, and the error assessed.

Fred was a pilot who truly flew an aircraft to its limits and he used a Wirraway, notorious for wingtip stalls, to measure the position error. Fred flew the Wirra so slowly that he was picking up the stalled wing with rudder and this about 30 feet

above the ground. I doubt if a Wirraway has been flown so close to the stall and remained in the air. Later Fred was to test the Pika, the piloted version of the Jindwick. The Jindwick is an Australian remotely controlled pilotless target aircraft, which has sold successfully for many years worldwide and is still in production. With the Pika, Fred repeated his Wirraway slow flying, but this time unfortunately flew too slowly and crashed. He was seriously injured but lived to fly another day.

Another test was to find the best climbing speed for a particular aircraft. Mark Marcovich and I used a Lincoln as exercise. We were to fly it at the published best climb speed and assess the result purely for practice. We misread the air speed, and our results showed that the airspeed we used achieved a better result than the published figure. Our airspeed was then adopted as the correct one after it was reassessed by another crew.

During the test pilot's course we were leaping in and out of many different aircraft types. In those with room in the cockpit we flew initially with pilots experienced on the type, but in single seat aircraft it was a matter of reading the book and learning the individual characteristics of the aircraft on one's own. In this way we rapidly gained sufficient experience to fly a brand new aircraft should it ever be our privilege to be the first to fly one.

The first Australian built jet aircraft, the Vampire, was just reaching the squadrons and I was lucky enough to fly this type on the course.

There was one other NCO on course named Edwards. He was the best academic among the pupils and always topped the ground examinations with flying colours. After the course he was posted to the Aircraft Research and Development Unit at Laverton, Victoria, and suffered a fatal accident on his first fully-fledged test flight. Strangely enough the crash had nothing to do with the test and was most unfortunate in its simplicity. Edwards took off in a Vampire fighter with full tip tanks. On becoming airborne he notified the tower that there was a large storm raging in the test area and was returning to land. He merely pulled a little too hard on his turn on to final and the extra weight of the tip tank fully stalled the Vampire at a higher speed than without tip tanks. He had no time and insufficient altitude to recover and spun in.

Minimum Control Speed of an aircraft roughly stated is the airspeed at which the pilot can keep the aircraft straight when one or more engines become inoperative on one side.

To find this speed the pilot starts by pulling an engine at an air speed at which he knows the aircraft will keep straight and then pulls off engine power at lower and lower airspeeds until the aircraft yaws and rolls out of control. My first attempt at this exercise was attempted at too low an airspeed in a Mosquito. The aircraft immediately rolled on its back and because the nose had dropped slightly and therefore gained more speed I was able to roll it right side up. It was the best roll I

have ever done, albeit unintentionally. If an aircraft has asymmetric power, a pilot must stay above minimum control speed particularly on take-off and landing or he could lose control. My superb roll in the Mosquito could not have been successfully accomplished near the ground.

The course was finally completed successfully, and apart from flying a large number of aircraft types, my flying had become very polished, but above all I had learnt to read the aircraft instruments and note any change almost as it happened. Another lesson learnt was to respond to the senses, especially feeling, hearing and smell and assess and action any of their changes as required.

The leading RAAF test pilot of the time was Wing Commander Cuming. This man was an outstanding aviator. He went to a nearby factory airfield and accepted the first Australian built Sabre, an American airframe with a British jet engine. During his acceptance test he flew it to our field and performed perfect low level aerobatics and this his first time in it. He tells the story against himself of driving into camp one night in civilian clothes and as is usual telling the guard his name.

'Wing Commander Cuming' he said.

"Thanks mate" says the guard, 'I'll keep my eye out for the bastard!'

The Wing Commander was later to prove that even the best of test pilots can make mistakes. When he was sitting in the RAAF's first Canberra bomber and pressed a wrong button, the tip tanks of a Canberra have explosive bolts to rapidly rid the aircraft of its tanks in the event of combat. The aircraft was in a hanger at the time, which exaggerated the explosion ten fold.

Mark Marcoviteh and I were posted to Test and Ferry Flight Number 2 Aircraft Depot Richmond. Our primary duty was to conduct acceptance flights of new Vampires being built by de Havilland at Bankstown. Other duties included acceptance of Mosquitoes, Oxfords and Tiger Moths, plus test flying of aircraft after major servicing at the Depot, mainly Dakotas and Mustangs and Wirraways. There were two dozen Tiger Moths in storage at the Depot which had to fly once a month to be kept serviceable. Apart from the Vampires, all other aircraft from civilian contractors were ferried after acceptance to Tocumwal where they were eventually sold for scrap. For our ferry trips we were allocated an Anson. Can you imagine a better flying posting anywhere in the world, especially in company of Mark, an airman and gentleman of the highest order. After a while we were without a doubt the finest Tiger Moth pilots anywhere, mainly learnt in the many low level dog flights in which we indulged. We were very careful to conduct these fights in remote areas and felt relatively safe from disclosure of our illegal fights. However do a thing often enough and it will bite you.

One day after a mock aerial battle, the C.O. called us down and said he wanted to charge another two pilots for dog fighting and low flying. He was driving through the bush and observed two Tiger Moths flying in what he considered to be a dangerous

manner. Would we investigate? There and then we owned up and after a blistering fifteen minutes, escaped further punishment due to previous good record. It was some time after that before we broke the rules again. We learnt other tricks, legally. Picking handkerchiefs off sticks with a wire on the wing tip. Looping through paper ribbons suspended thirty feet off the ground. These things were legal in that we used to perform aerobatic manoeuvres every year for the Battle of Britain air show celebrated in Australia in September each year. One event, which appealed to the public, was a dummy attack in Vampires on an old aircraft fuselage placed in front of the crowd. We flew across the gunnery range, where gunners fused blanks, and shortly thereafter the wreck was demolished by remote control from the ground. We later heard experienced airmen in the News tell how they saw the rockets hit the target.

The acceptance flying of the Vampires from Bankstown become very routine. We never had an incident and flight snags were never more serious than an instrument becoming defective in flight. This reflected great credit on the factory and their test pilot Black Jack (Brian) Walker.

Black Jack was a superb aerobatic pilot and often entertained the factory workers before landing after a flight. In those days very few aircraft flew at Bankstown, which was all over grass without defined runways. The pilot merely landed into wind. One day with just one Tiger Moth landing, Black Jack managed to land and wrap the Tiger around the Vampire. Fortunately no one was hurt.

Photo via Tristan Masterson



A79-484	4004	F.30	<p>On 18/04/1950 while Brian "Blackjack" Walker (HDH Test pilot) was testing Vampire A79-484 he landed after he's radio had failed. Unbeknown to him there was a Tiger Moth (VH-CGK/A17-53) on long finals with the instructor under the hood performing an instrument landing. The Tiger collected the Vampire as it landed with the propeller smashing through the Vampire cockpit canopy. All onboard survived with minor injuries. The Tiger was written off but the Vampire was repaired and delivered to the RAAF six months later. Disposed of 05/10/61. Scrapped 11/61 Tocumwal NSW. Cleared from Tocumwal 19/04/65.</p> <ul style="list-style-type: none"> • Images of A79-484
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Two of the hangers at Bankstown head electric cables running between them some 40 feet above the ground. Black Jack used to sometimes fly low between the hangers to keep people awake. One day after Brian took-off in a Mosquito, the electric cables were removed. Brian returned, flew by the hangers and landed. The mechanics who met him asked him straight faced what had he done with the cables? Brian looked up, saw the cables were missing, examined the aircraft minutely and until now did not know how he pulled the cables down without damage.

At Richmond we tested to our hearts content, tested parachutes by dropping them attached to wooden dummies from under our wing, practiced night flying on any type available, and had some very enjoyable flights to Tocumwal, returning in the faithful old Anson. Marc was posted to England where he was killed as test observer in a Varsity aircraft, which lost its main door in flight.

I continued with Test and Ferry for a further 18 months until I was posted to the Aircraft Research and Development Unit at Laverton, Victoria.

Work at ARDU consisted of investigating suspicious flight areas of aircraft, notice of which was forthcoming from squadron incident reports, developing performance and handling techniques of new RAAF aircraft, secondment to aircraft factories to assist civil test pilots and training other pilots in test procedures.

One area of investigation in which I was involved was the Wirraway wing tip stall. The wing was trefted (?) with ordinary knitting wool about few inches long stuck to the upper surface. The aircraft was stalled at height in the landing configuration and the behaviour of the airflow over the wing, as evidenced by the movement of the wool, was recorded by a movie camera. Eventually pieces of metal were strategically placed at the wing roots inducing an inboard wing stall earlier than tip stall, thus making the aircraft much safer.

The Korean War was being fought at the time, and reports were received that aircraft with axial flow jet engines, which fired cannon shells past the air intake, suffered engine stall and sometimes flame out due to suspension shock waves upsetting the engine entry airflow at high altitude. A team was sent to Darwin to investigate and if possible rectify this defect in our Sabres. I was to do the flying and prior to departure undertook a decompression chamber course and fitment of a partial pressure suit. The object of this was to gain protection from the phenomena of nitrogen leaving the blood stream in the vent of engine flame out and subsequent loss of cabin pressure at high altitude. The result of nitrogen loss was death.

So I flew to Darwin via Edinburgh S.A and Alice Springs. Alice at that time had 5000 feet of airstrip at an altitude of 1500 feet and it required precise handling to safely land a Sabre and to take off with fully loaded tip tanks.

The idea of using Darwin was because low temperature was an important aspect of the trails. At the tropics in summer the ionosphere is close to the earth and very low temperatures prevail in the ionosphere.

On my first test flight at about 41000 feet over Darwin, the engine suddenly stalled, I remedied this by throttling back and diving, reported by radio to the ground crew and climbed again. The engine stalled, I recovered and landed. I rang the C.O at Laverton and reported the matter 'Good' he said 'I'll fly up tomorrow, I was hoping that would happen'. I was somewhat abashed to find that apart from gunnery, I was investigating another phenomenon concerning engine stall and flame out which was related to engine revolutions and outside air temperature. It was beyond my experience but the C.O knew of it and had neglected to tell me. The overall result was that we fixed the gunnery problem by placing small baffles adjacent to the cannon nozzles thus deflecting the shell-induced shock waves away from the engine intake. The temperature, RPM problem enabled us to draw a small flight envelope which pilots could easily avoid and thus retain their engine power.

All of this took many flights. I suffered many engine stalls and flameouts. The greatest altitude I achieved was 57,000 feet and the lowest temperature was -87 degrees Celsius. All instruments were delicately calibrated and I used to report my readings by radio as I fired the cannon. Many shells were spat into the firing range and as a Sabre could only be successfully relit below 35,000 feet, I spent a lot of time firing, reporting flame out, diving to 35,000 feet to relight, then climbing up again to repeat the whole thing. After a successful sortie my spirits were given full rein by placing sonic booms on the ground crew. This was achieved by diving at about 45,000 feet across the target, rolling the aircraft on its back and diving vertically.

A pilot of a Sabre is unaware of his speed except for the Mach metre. Mach is the speed of sound and this is the only accurate source of information to tell the pilot he is supersonic. The real reward was to hear of the fright of people on the ground when subjected to an unexpected sonic boom.

Three years at ARDU passed swiftly. Testing new Canberras and Sabres at Avalon, new Wingeels and reconditioned Lincolns from Fisherman's Bend, bombing trials, Beaufighter concision, rain making..... level speeds at Laverton kept me busy.

It was towards the end of my posting to Laverton, that a classic joke actually occurred. Aircraft with retractable undercarriage have a warning horn, which sounds as the throttle is retarded for landing if the pilot has not locked down his undercarriage. Pilots who have forgotten this undercarriage are reported to have said that they landed wheels up because they could not hear the control tower warning them, because of the noise of the horn blowing. A pilot used these words in my presence after he had accidentally landed wheels up.

Apart from the dubious honour of probably successfully firing a cannon at a world record altitude, I flew a Canberra around Australia on radio trials. Some 20 years later an F111 flew around Australia and claimed a record. Someone wrote to the RAAF news and pointed out the F111 was only 10 minutes faster than my Canberra.

November 1956 saw me entering a new phase of flying. I accepted a position as civilian test pilot at de Havilland's Bankstown. The factory was about to commence a new production line of twin seat Vampire trainers, and Black Jack Walker wished to pursue another avenue of flying. My first job was to test and evaluate new hydraulic toe brakes in a trial aircraft. Initial trials were disappointing. The brakes were erratic and unreliable. I blew a few tyres although anti skid devices were fitted to the aircraft, and on two occasions the brakes failed completely, fortunately without any other damage. Eventually a different type of pressure reducing valve was fitted and the brakes were acceptable.

The next major task was to conduct spinning trials on the trial installation Vampire. This consisted of spinning the aircraft in the fore and aft centre of gravity limits at all up weight and lightweight, normal and abnormal methods of entry and recovery from straight flight and inverted.

This took a lot of hours and many spins all without incident, and finally I was so confident of the aircraft's spinning characteristics I was able to demonstrate to an RAAF pilot, the aircraft's ability to recover from a fully developed spin of its own accord. That is, I would put it in a spin and take my hands and feet off the controls and the aircraft would recover of its own accord. Only one small problem existed and that was the aircraft's canopy would fog up under certain meteorological conditions when the throttle was pulled back, decreasing the volume of demisting air to the canopy. Increasing the demisting volume at low throttle settings later rectified this.

The RAAF accepted the spinning characteristics and production of MK 35A aircraft was started. I passed the first aircraft off the floor to the RAAF fully serviceable in all respects. The acceptance pilot ejected from it as he could not recover from a spin. No satisfactory reason could be found and I continued to test the new Vampires according to the official test standard including spins.

I had checked eight aircraft satisfactorily and was on a final flight on the ninth, checking a minor flight snag. I had already tested the spin, and as I was at 32,000 feet decided to spin down to lower altitude. I commenced recovery at 14,000 feet and the aircraft kept spinning. This has never happened to me before but I applied in spin aileron with stick forward, the aircraft responded to opposite rudder, and recovery was affected. The failure to recover by conventional action, that is stick central and forward, full opposite rudder, pull out of the resulting dive when rotation ceases, was reported, and I commenced a further series of tests to attempt to establish the reason.

The Mk 35A Vampire spin is not a comfortable manoeuvre. Enter a spin, the aircraft is stalled by throttling off raising the nose to stall the aircraft then with stick hard back applying the rudder in the required direction. At the stall initiation the aircraft rolls on its back, drops the nose, rotates rapidly with the nose rising, slows down rotation slightly, then repeats it all without going inverted again. It rotates once per second, loses about 800 feet and bumps the pilot around the cockpit. It is essential to pick a mark on the ground and check for it on each rotation, otherwise it is easy to become disorientated.

It took a further nine flights to reproduce the problem and when conventional recovery action had no effect I confidently applied in spin aileron with stick forward. Again no change occurred. I tried to rock the aircraft with elevator and engine, tried dive brakes, out spin aileron and hands off. At this stage I had used a lot of height and decided to bang out. At least this was successful and I landed safely without further ado.

The aircraft continued spinning till it struck the ground.

A farmhouse was near my decent point. I knocked on the door, a woman opened it slightly, stuck her head around it, listened whilst I told her I had bailed out and where was the nearest phone? She pointed down the road and said 'about a mile down there' and shut the door.

I assumed.....

A79- 610	413 1	T.35	Crashed 13/12/57 6 nm south of RAAF Richmond NSW. The de Havilland pilot, Mr E Shaw was unable to recover from spin during pre-delivery test flight and ejected at about 10,000 ft without injury. RAAF Ejection number 14.
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<http://www.adf-serials.com/2a79.shtml>



Rita

My husband Ted rang and said 'There's a trip to Bangkok in a Nomad week after next- want to go?'

I said 'yes alright' and it was as easy as that.

Ted is a test pilot and during his 40 years of flying he has had numerous trips all over the world. Someone then had to look after his five sons so it wasn't until recently that I was free to accompany him. Of course we had been on an odd flight to Queensland, Moree or Victoria as a family and we enjoyed that. But apart from a trip around the world some 23 years ago and three idyllic years at what used to be the New Hebrides, this was my first opportunity to accompany him on an overseas delivery flight.

My preparations were easy, a medium size suit case, a smaller overweight bag, a thermos, plastic plates and mugs, knives and spoons and an old esky to be disposed of at the end of the flight, plus cholera and smallpox needles. My passport was up to date from Vila visits and required an Indonesian visa only as all the other countries could be entered on a passport alone.

The route was almost a straight line through Australia, a left turn at Darwin, a right turn at Singapore, then Bangkok dead ahead.

The weather was shocking at Bankstown on take off. Low cloud and drizzle- however it cleared up by Mudgee and we didn't see cloud again until we were nearly at Bangkok. The aircraft behaved perfectly, the weather was mostly clear and the temperature warm so I had nothing to do but enjoy it.

Once past Mudgee I was bale to observe the ground all the way to Mt Isa, our first stop. The aircraft cockpit offers outstanding visibility and a most comfortable seat. The windows extended below one's knees so the view was panoramic.

The outstanding sights on this leg were the rivers I recalled learning about at school such as the Darling, Paroo, Coopers Creek and the Diamantina- all mighty rivers in the wet but at this time of the year little more than a line of waterholes. The towns of Mudgee, Cunnamulla and Windorah passed under us on by the windows until an unusual looking rocky formation indicated Mt. Isa ahead.

We had flown for over eight hours. We had eaten well in the air and I was able to move the aircraft easily. Physically I was in good condition and not tired as I had expected to be. Mt Isa is a clean, modern mining town and a credit to the multinational inhabitants. The tallest chimney in the southern hemisphere stood over the mine and the town like a sentinel.

A good shower, meal and bed saw us ready early next morning for the leg to Darwin five hours away. Not long out of the Isa and the ground looked like gibber country. We flew down for a better look and for 500 kilometres saw little but flat land, an odd bird, a few cows and a couple of windmills tapping the artesian basin. Occasionally a few acres of stunted growth interspersed with huge red ants hills appeared. We joked that the only thing the cows and ants had ever seen apart from other cows and ants was our aeroplane.

We passed Burnet Down a little less than half way and reported our position. The station was surprisingly large with seven or eight big corrugated iron buildings an airstrip and dams and a radio beacon. A nearby river appeared to have permanent water but apart from around the station the land looked bare and sparse. No wonder they need such huge acreages to run any reasonable number of cattle. I could not help but recall what a lifesaving thing Flying Doctor and School of the Air must be to the families in this vast unfriendly looking interior - nothing but flat, largely uninterrupted space for thousands of square kilometres. Strangely enough it was not boring to fly over it.

At last Larrimah, closely followed by Katherine, revealed good green growth and it seems to improve all the way to Darwin with small towns and villages increasing in number. We were cleared to the approach at Darwin but had to overshoot to allow some RAAF Mirages to land ahead of us. The aircraft was refuelled and tied down,

a weather for the leg to Bali ordered, customs advised of our morning departure and then a swim and the delight of Darwin to follow. I was most impressed with Darwin, I had heard that prior to the cyclone it was not particularly inviting, but now it was neat and clean, well paved and laid out. The shopping outlets interspersed with mall and gardens and generally gave the impression of a place that knew where it was going. We spent a most enjoyable evening there.

The first couple of hours out of Darwin was over water with not much to see but an odd fishing boat and high oil tankers. Then Timor popped up on our right, Simba on our left and many other islands and finally Bali after seven hours in the air. Some of the islands, although inhabited by large villages look extremely dry and I am sure the inhabitants were anxiously awaiting the rainy season. Where rice was grown it seemed to grow right down to the waters edge .A feature of the southern coasts of the large islands were very high cliffs interspersed with interesting looking sandy bays.

Bali, the island for dreamers, tropical, exotic, tempting with its lovely beaches and gentle breezes through the coconut trees. We choose to stay at a resort near the airfield. It was probably built for Dutch planters to visit on holidays. On the beach with a clear swimming pool, accommodation dated but comfortable situated in the midst of a lovely garden with plants and trees I couldn't begin to describe. The people were friendly, but displayed a business approach which became irritating. The hard sell was over done just a little. Nevertheless another enjoyable afternoon and evening prepared us for our flight to Singapore on the morrow.

Seven more hours mostly over water and the crossroads of the East appeared under the aeroplane's nose. Singapore waterways were pack jammed with ships of all shaped and sizes. Singapore Airways Director steered us to Selectar, the Singapore Air Force Base, where we were to land. We had planned on two nights here, but as the strip was closed two days later we stayed for three nights.

We lived in a first class hotel in Singapore and spent our days window shopping and travelling on tours. We planned to continue to Hong Kong after delivering the aircraft so we saved our shopping up for there. I was brought up in the days where Kipling and Raffles were household words, so I was a little disappointed to see the old Chinese godowns being torn down and replaced with huge modern shopping emporiums. A little of the romance seemed to be torn down too- but such is progress. The skyline of Singapore is punctuated by tall apartment buildings and marvellous modern shopping centres and hotels as land is at an absolute premium. The Singaporean is a mixture of many races and it is a credit to the human race that they live in harmony in such crowded conditions. It was indeed fortunate that their economy is sound.

Basically Singapore is shopping, and after having my photograph taken outside the Shaw Centre I seemed to be attracted to jewellery stores. It's a strange thing but I rarely go near a jewellery store at home, so I wouldn't know if I saw a bargain or not.

Is a cultured pearl better than a natural one? I will never know. We enjoyed some scrumptious meals in Singapore and ate a lot of tropical fruit and very deliberately had a Singapore Sling at Raffles hotel.

Only six hours to go. Across Malaysia and the Gulf of Thailand to Bangkok. Malaysia appeared to be covered in rice fields and rubber plantations and was very green. An impression I have of the East is that large numbers of people were eating every second of the day particularly at footpath cafes and I wonder where all the food comes from.

Finally Bangkok, suffering its worst floods in thirty years. The cloud was low so a radar approach was made and the delivery was concluded with the new owners. I was able to spend two days in Bangkok and enjoyed a visit to the Royal Palace and the Jade Buddha. The palace had just finished its first clean up for thirty years and stood out against the sky like something out of the Arabian nights. Steeples and pagodas glistening with coloured rocks and bedecked in gold.

Bangkok itself was extremely dirty - due perhaps to the floods and after seeing one of the seven modern wonders of the world, Bangkok street traffic – I was happy to leave. Bangkok traffic is beyond description. Cars and trucks push into the traffic lines in a manner which would start a fight in Sydney, but I can't recall seeing a collision. The main road from the city to the airport is a six lane divided highway with canals along either side. On one occasion I was a passenger in a car on an outside lane when a truck ahead of me suddenly swerved left through the two other traffic lanes and went straight into a canal. How or why it happened I didn't find out. On the same trip a motor scooter passed us with dad driving, a seven year old standing between his arms, mother side saddle on the pillion seat feeding a baby.

We did not return straight home but proceeded to Hong Kong, Macaw and China, which is really another story. The flight was a trip of delight the whole way and I consider myself very fortunate to have been able to do it.