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Australian Aviation - Military & Civil : Bro. Robert Hill Buchanan

The enormous distances that separate the various State capital cities from each other and their respective rural centres, no doubt, has had an influence on the development of aviation in this country. In addition, because of the greater speed of aeroplanes as a form of transport and communication, and the, then existing poor condition of country roads, it has helped to remove the seeming isolation of many of its rural communities with regards to commerce, medical treatment, and similar important matters.

The history of aviation, if we discount the mythical figures of Icarus and Daedalus really begins with two 18th century French Freemasons - Jacques Etienne and Joseph Michael Montgolfier with their successful experimental balloons constructed from paper- and their first flight being during the November of 1783. It is interesting to note that the Montgolfier Brothers, or should it be the Brothers Montgolfier(?), seldom ventured aloft in their new fangled contraptions - of course - they had been "taught to be cautious". The Montgolfiers were not the only the only Freemasons of that period who showed an interest in aviation as there was also a member of their lodge "Noef Soers" which met in Paris - the American Bro. Benjamin Franklin. Despite the American colonies being in a state of rebellion with Britain, Franklin corresponded on the matter with his fellow Freemason scientist, Bro. Sir Joseph Banks FRS and discussed the possible implications of the Montgolfier's experiments.

It is generally accepted that, London-born Bro. Lawrence Hargrave, was Australia's aviation pioneer in the period 1884/1909 - his experiments with ornicopters, kites and other experimental designs being well documented. This is not strictly true as Hargrave had been inspired by an aviator, Tom Gale, whom he had seen ascend in his balloon at the Sydney Domain during 1870. The facts of the situation are that many years prior to Gale, an emancipated convict, Bro. Dr. William Bland MLA of Lodge N° 260 Irish Constitution, had produced a feasible design for an "atmotic" ship in 1851 - many years prior to the German Zeppelin which first flew in 1900. Bland's dirigible was to have been ninety feet long, have an envelope filled with hydrogen, to be propelled by two propellers powered by a steam engine and carry a load of over two tonnes.

Since that time there have been many other members of the Craft who have distinguished themselves in both military & non-Military aviation. However, tonight's central figure was not one of the more highly publicised aircrew figures - but he still played a very important part in the development of civil aviation in Australia. He was Bro. Robert Hill Buchanan. It is not my intention to name-drop Masonic aviators but just to mention a very few, these include:

- (1) The "Lone Eagle" Col. Charles Lindbergh
- (2) Air Commodore Sir Charles Kingsford Smith
- (3) General William "Billy" Mitchell
- (4) Group Capt. Sir Arthur Whitten Browne - of Alcock & Browne [1st Trans-Atlantic aerial crossing]
- (5) Colonel John Glenn - Astronaut
- (6) Colonel Ed "Gus" Grissom - Astronaut

There have also been three Grand Masters of this Masonic Constitution who were involved in aviation, these being:

- (a) M.Wor. Bro. Roy A. Woodman who served with N° 456 Squadron of the R.A.A.F.
- (b) M.Wor. Bro. Noel W. Warren who served with the R.A.A.F. in Canada, England and Scotland
- (c) M.Wor. Bro. Robert A. Hammond who used to travel to country Masonic meetings by aircraft.

All the foregoing, with the exception of Bland and Hargrave, were aircrew - although "Smithy" did also hold, for a short time, an Aircraft Engineer's Maintenance Licence in the old "D" category for minor engine maintenance. It is felt that it was about time that the brethren and their ladies had brought to their attention the story of a member of the Craft who not only kept them flying during World War One - but also helped to establish the enviable reputation Australia used to enjoy when the Department of Civil Aviation was still in existence. The man to whom I allude is virtually unknown by most of today's aircraft industry and probably forgotten by those, still alive, who were members of his Masonic lodges in Queensland and New South Wales.

Although Bro. Buchanan was born in Scotland, he was an Australian aviation pioneer having amongst other things having a member of the crew who made the first aerial voyage around the majority of Australia in an aeroplane. As we

shall see, he was one who has been virtually forgotten & overlooked by all but a few of the rapidly aging members of the "Early Birds Association", or those who have read Norman Ellison's book "Flying Matilda".

My own interest in Jock Buchanan stems from several sources, he was probably the first of Australia's civil aircraft inspectors - a profession in which I followed him as it painstakingly developed into what became the Airworthiness Surveillance & Standards system. Secondly, he was a Buchanan, and, as such, I am hereditarily linked to him through the MacMillan and Bell clans.

Note: There have been many Airworthiness Surveyors who were Freemasons, and at least two have been the Chief Airworthiness Surveyor of Australia - Wor. Bro. Jack Shaw of the Victorian Const. and Bro. Neil O'Neal of the N.S.W. Const. A few of the Sydney based Airworthiness Surveyors joined Lodge Aviation N^o 688 in the early post-war period when it used to meet at the old Redfern Temple.

The subject of this address always showed a keen sense of principle and a willingness to stand up and be counted. Unfortunately, this is not quite so evident in an increasingly Public Service environment and the enormous pressures being applied by the major airlines, pressure groups i.e. A.O.P.A., G.A.A. etc., and the great changes in the general structure of the aviation industry. Finally, I feel that it is a darned good story that should be recorded before it is lost and forgotten for all time.

Robert Hill Buchanan was born on the 16th September 1889, at Airdrie, in Lanarkshire, Scotland. The Buchanan family, consisting of father, mother, four sons [Robert was the eldest], two sisters and a step-sister, migrated to Queensland during 1910, and, had immediately prior to that time, been relatively wealthy. The father, who studied law at Glasgow University had not graduated, however, he had inherited a chain of butcher shops in the Glasgow area. Unfortunately, Buchanan, the father, lost a considerable amount of money due to his having unwisely speculated in the South African diamond fields. He tried to recoup his losses through a horse-racing syndicate and a sure-fire thing running in the English Derby. Unfortunately, as with his diamond fields venture - he was unsuccessful.

Our subject, Robert Buchanan, served an apprenticeship at the Airdrie Iron Works and studied at the Airdrie Academy Technical School. A hint of his abilities was given in his examination results for the term of 1909/1910 were:

(a) Machine construction = 100%	(b) Applied mechanics = 100%
(c) Mathematics = 68/75	(d) Overall grading = Excellent

It is interesting to note that the famous physicist, Lord Kelvin, was one of Buchanan's tutors at the Airdrie Academy. Kelvin is reported to have demonstrated, mathematically, that flight by a heavier than air, powered, machine was impossible.

At the time of the Buchanan family's migration to Queensland, Robert was aged twenty-one and was by trade a skilled fitter and turner, Nevertheless, prior to his leaving Scotland he had already developed a keen interest in aviation. He is known to have attended one of the first air-shows to be held in Scotland - at Lanark. During that "show" he saw such characters as the, then, legendary Pegoud - who "looped the loop" and Drevel - who set a new world altitude record of 4,000 feet! There were also present such pioneer English aviators as Graham White, A. Vernon Roe and some other magnificent men in their flying machines. During the show Jock Buchanan got his first acquaintanceship with a Le Rhome "Gnome" aircraft engine.

Note: The Gnome was of the early rotary type where the crankshaft remained stationary whilst the cylinders and the crankcase rotated around it - carrying the propeller with the rotating mass. This type of engine had been designed by the Seguin Brothers and was based on a principle suggested by Bro. Lawrence Hargrave.

Upon the Buchanan family's arrival in Queensland, the father, rather unwisely as it eventuated, took advantage of a land settlement scheme receiving a parcel of land in the Brigello Scrub area. This was about ninety miles to the west of Dalby. The land was heavily infested with prickly pear. Robert Buchanan helped to build the family homestead which is still standing to this day - although in a somewhat dilapidated condition. I have a photocopy of a photograph showing young Bob working on the roof trusses of the wooden building. The Buchanan's quit the Brigello Scrub area and moved into the Toowoomba district where young Bob Buchanan then struck out on his own and became one of the foremen at the Toowoomba Foundry. Sometime later Bob again moved to Charleville where he became the fitter in charge at the railway workshops.

It was in this period that Robert Hill Buchanan petitioned to join Freemasonry and he was accepted as a member of Lodge Charleville N° 2393 of the English Constitution. His Masonic history for this period as follows:

(a) Initiated - 26th August 1915 (b) Passed - 23rd September 1915 (c) Raised - 9th December 1915

The U.G.L. of England's Master Mason certificate issued to Bob Buchanan was S/N° 13226 and his number in the Lodge Charleville's register was 143. Whilst a member of that lodge Bro. Bob did not hold any office and he called off on the 4th May 1916 - the reason being given for this action being recorded as "*WAR SERVICE*". We may fairly deduce from later details, which will emerge, his calling off may just have been his native Scottish canniness in being careful with the "*bawbees*".

Wor. Bro. Bob Irwin, who in 1989 was the lodge secretary of Lodge Charleville - now N° 70 on the register of the U.G.L. of Queensland, in answer to my research queries into Bob Buchanan stated that there were no further references to Buchanan in his lodge's archives. He also added, that, as practically all of Buchanan's contemporaries were now dead in the seventy year period since Buchanan had called off from Lodge Charleville, it was doubtful if he could assist any me further. Wor. Bro. Irwin had originally thought that I was carrying out research into Bro. Alan Vickers - who was deeply involved in the Flying Doctor service when he had been based in that town. Charleville had early links with aviation as it was one of the southern terminals of a small aerial charter company operating out of Longreach, the Queensland and Northern Territory Aerial Service, who were destined to become Australia's flag carrier in aviation - QANTAS.

In 1916, like many first and second generation British migrants then resident in Australia had done before him, Jock Buchanan volunteered for the A.I.F. and enlisted in the infantry. Shortly afterwards, he was transferred to the Engineers, however, Jock had a brother in the artillery and so he put in for a transfer to the "GUNNERS". The interviewing officer administering such transfers told Buchanan that Queensland was to provide twenty-five men for the newly formed Australian Flying Corps (A.F.C.), he then strongly suggested that Jock's answer was to be in the affirmative - and that he wanted Jock's answer by 16.00 hours sharp! As a transfer to the artillery was obviously out of the question, Jock Buchanan, "volunteered for the Australian Flying Corps and thus began Robert Hill Buchanan's career in aviation - but not in the manner he could have possibly have foreseen!

It is more than just legend that the military forces are without parallel in their ability to manufacture "round pegs for square holes - or the misplacing of technical skills and labour which could be better & more gainfully employed. Such was the situation in which Bob Buchanan found himself when he was posted to Upavon, fifteen miles south of Marlborough in Wiltshire - on the edge of Salisbury Plain. It was here that this skilled fitter & turner donned the blue and white striped apron of the squadron butcher. However, in his youth, Bob Buchanan had often helped out in his father's butcher shops for short periods and his past skills came in handy for a while.

In a fairly reasonable time Jock exchanged the striped apron for a pair of engineer's overalls; he then became involved in the maintenance of aircraft for N° 4 Squadron of the British Royal Flying Corps [R.F.C.]. When the R.F.C. formed its first training squadron, N° 5, Buchanan's skill & dedication were fairly soon recognised and he was promoted to the rank of Technical Sergeant Major [W.O. 2nd Class] in the September of 1917. The warrant which confirmed his appointment was signed by General Birdwood, Officer Commanding of the Australian Imperial Forces, and was dated the 1st August 1918. This document is still in the possession of the Buchanan family and was sighted at their home in Balgowlah during 1989.

Bob Buchanan's job was to keep N° 5 Squadron's aircraft serviceable and flying. At that time there were more pilots being killed during training than in actual aerial combat on the Western Front. Over two hundred and forty six pilots were trained by N° 5 Squadron without a single serious accident. No other squadron had a record comparable with it. N° 5 Squadron was equipped with thirty-six, of what was then the R.F.C.'s basic trainer, the French built Maurice Farman [MF] "Shorthorn". The MF's consisted of two models i.e. the MF 7 - the Longhorn and the MF 11 - the Shorthorn, the latter having been designed in 1914.

Note 1: Both the MF7 & 11 were used in a variety of roles besides that of ab initio training e.g. aerial observation, communications and even bombing. These aircraft formed a major part of the Western Allies air power during the earliest part of the war.

Note 2: From an Australia aviation historical point of view, the MF 11 is quite important as it was the type of aircraft operated by the A.F.C. in the Middle East during W.W. I. That event occurred on the 31st May 1915 and involved the "Half Flight" [also known as the "Mesopotamia Flight"] when the aviators involved were an Australian named Petre and a New Zealander -Riley.

Note 3: The MF 11 was flown by "Smithy" whilst he was acting as a flight instructor in England after he was wounded in aerial combat on the 14th August 1917. As a result of the action he lost three toes and was lucky to survive as there were over one hundred and eighty bullet holes in his aircraft following the incident.

Note 4: The MF 11 was also used by the Royal Naval Air Service [R.N.A.S.] when they carried out the first night aerial bombing raid of W.W.I when they attacked German artillery installations at Ostend.

Note 5: The newspaper article referred to in Bibliography shows a Renault engine with some Australian servicemen. Buchanan is not the central figure as one might think from the caption, he was the rather thin faced, lantern jawed individual in the background wearing a slouch hat.

As the story of Bob Buchanan's aviation career unfolds, it will be seen that he was always willing to have a go, on one occasion, whilst working in the Northern Territory, he tried to coerce the pilot of a Departmental aircraft into making an unofficial attempt on the Australia to England air record - in the bargain, no doubt, thinking of a free trip to the United Kingdom. Another example of the adventurous side to his character involves an episode which occurred whilst he was stationed at Shawbury near Shrewsbury in Shropshire. It also involved the French aviator, Captain Maurice Gilleaux, who was on attachment to N° 5 Squadron as a flying instructor.

The Frenchman, Gilleaux, has a special place in Australia aviation history as he was the man who had flown the first air mail ever to be carried in Australia - between Melbourne and Sydney. This feat happened in the period 16th/18th July 1914 when the total time elapsed for the completion of the journey was two days, nine hours and thirty-eight minutes. The air cargo on that flight weighed 18.2 kgs and consisted of nearly two thousand postcards - for which the people had paid the, then, princely sum of one shilling for their postage. In addition, Gilleaux also carried a small consignment of "O.T." lemonade from its Victorian manufacturer to the Commercial Travellers' Club in Sydney. This was also the first air freight ever carried commercially in Australia.

The aircraft used by Gilleaux was a Bleriot monoplane with the flight being carried out in appalling weather conditions. The Bleriot had an open cockpit and it must have been most unpleasant for the pilot, and, as the aircraft did not even have the range of even a modern day ultra-light category aircraft, the flight virtually consisted of a series of short "hops" from one paddock to another. Airfields were a thing of the future as we shall see a little later. Gilleaux gave many flying demonstrations in both Victoria and New South Wales before setting up a flying school near Richmond, N.S.W. in the August of 1914. His last aerial demonstration in Australia was at the Hawkesbury Races on the 26th September, following which he returned to France and served in the French Air Force. He died, at the age of thirty-four when the aircraft he was test-flying crashed near Villacoublay on the 21st May 1917.

To return to N° 5 Squadron, Gilleaux and Bob Buchanan, the squadron had just taken delivery of its first 80 h.p. Renault powered Farman aircraft - the previous models having only a 70 h.p. engine. Gilleaux in support of all things French, in the Officer's mess of the R.F.C., had declared that the new aircraft could carry six men to an altitude of 1,000 feet. The R.F.C. officers challenged this and a wager was there & then laid. The Frenchman is reported to have gone to the Australian's hangar at 3 o'clock in the morning and to have "persuaded" five volunteers to join him in the test flight. Unfortunately, the MF 11 was designed to carry only two persons - the pilot and his observer. Gilleaux was naturally in the pilots seat, another was bundled into the front seat, the remaining four took up positions on the lower wing's upper surface - each one hanging on to a wing strut! Bob Buchanan was one of the "wing clingers" and helped the Frenchman to win his wager. If one considers the possible implications of their actions i.e. the possibility of falling some one thousand feet without a parachute. Plus the frail construction of the MF 11 - which was mainly composed of doped lightweight fabric and a spruce airframe - it is quite surprising that the lower wing's structure was capable of sustaining such a flight load and the additional stresses imposed on the overall structure during the landing.

When the war ended, Bob Buchanan rejoined the Australian Air Force [A.A.F.], this later became the Royal Australian Air Force [R.A.A.F.], and retained his wartime rank of W.O. II. Things were not the same for him in the peacetime service as a man as, being a man of strong principles who had made it his business to know the King's Regulations better than many - problems soon began to accumulate. Jock was about 5' 5" in height, had round shoulders and a stoop. These physical details were coupled with a rather blunt and concise style of communication. In 1922, he was then thirty-three years of age, he was ordered to attend a course at Holdsworth Army Camp for the intended purpose of

giving him and some other wartime senior N.C.O.s still in the service - a more military bearing. One day an Army P.T.I many years Jock's junior, cornered him and snapped "We're joining to get that bloody hump off your back! To which Jock replied "They've been trying to do that for years brother - that hump was born there!" His former colleagues in the aviation industry have informed me that his manner was such that he could have been thought of as having an enormous and permanent chip on his shoulder.

Nevertheless, his manner with the ladies cannot have been too bad as, prior to the course at Holdsworthy, on the 22nd of April, 1920 he had married Miss Essie Ward - the daughter of a wool classer. They spent their honeymoon in Sydney, and at the time of our interview in 1989, their son, Bro. Ian W. Buchanan of Lodge Balgowlah No 392 U.G.L. of N.S.W. still had in his possession a receipt for two pounds and ten shillings for a flight at that time over Sydney Harbour - made by his mother & father. This would probably make Mrs. Bessie Buchanan one of the first women to have commercially travelled by air in New South Wales.

During 1922 another problem arose whilst he was stationed at Point Cook, Victoria. A senior officer demanded of Warrant Officer as to whether it was true that Jock and his wife had been playing cards with a member of the ranks, and, if this was true, then it had to stop immediately - conduct prejudicial to good order and discipline, blah, blah, etc. To this Jock replied that, whilst he, the officer, could order him, as a serviceman, as to who could or could not enter his married quarters - he didn't think that he could order Mrs. Buchanan as to what she could do as this was still a free country. The senior officer said little more than to curtly remark that Point Cook was obviously not big enough for both of them.

Note: A version of this story is also narrated in Norman Ellison's "Flying Matilda", however, in that book the story is somewhat changed and W.O. & Mrs. Buchanan are alleged to have been playing cards in a commissioned officer's married quarters. Ian Buchanan assures me that Ellison's version of the incident is incorrect, he added that his father had little time for any officer who "swung his rank."

For Jock Buchanan the writing was clearly on the wall with the pressure being applied to him and other carry-over wartime senior non-commissioned officers. Any future service with the newly formed R.A.A.F., for him, was obviously limited - and resulted in him taking a position with the newly formed Civil Aviation Branch of the Department of Defence, whose Controller was Lt. Colonel Horace Brinsmead O.B.E., M.C. Brinsmead knew of Buchanan's proven abilities as an aircraft engineer having served with him on N° 5 at Upavon. Horace Brinsmead was not only a top administrator but also pilot who had been transferred to the A.F.C. from the R.F.C. after having been so badly wounded on the Western Front that he was considered unfit for further service.

However, Bob Buchanan was faced with a problem as a time-serving, regular airman who had signed on for a number of years in the Service. To leave the R.A.A.F. before that term had been completed meant that he would have to "buy himself out" - this thought was naturally abhorrent to Jock's thrifty Scottish nature so he set about "arranging a free transfer from the R.A.F. to the C.A.B. He finally succeeded in his efforts and it may have been bittersweet when his discharge papers were finally signed by Squadron Leader Murray-Jones at Point Cook - who also happened to be the senior officer of whom he had run foul.

Another example of Jock's knowledge of the rules and regulations, and his cannyness where money was concerned, is evinced in his negotiations with the C.A.B. with regards to his salary. He applied for a one pound per annum reduction in his gross salary. This was not as silly as it might at first appear, for, as a consequence of the reduction in his basic salary it entitled him to travelling, accommodation and other allowances which resulted in him receiving much more, "cash in hand", in view of the nature of his employment and the amount of travelling which it employed

In 1922, the situation facing anyone wishing to travel by aeroplane within Australia was very much different to that facing the air traveler of the 1990s. Not only was there the sheer novelty of air travel - but it was also an adventure - aircraft then being relatively unsophisticated and in the very early stages of their development. Further, airports, airstrips generally consisted of an uneven paddock, and, if one were lucky a wooden shed with all four walls intact. Airports had still to be located, surveyed and developed. It was in this area that Bro. Bob Buchanan played an important role in the situation of many sites being a member of the very early aerial survey team. In those days, there was no specialised class of persons such as became known as Flight Engineers, neither was there a controlling authority for major airports such as today's Federal Airports Commission [F.A.C.]. The F.A.C. in 1988 inherited what

was left of the Australia-wide network of airports - after the Federal Government had transferred, in their policy of devolution, most of the assets to local authorities and other bodies.

Australia's aerial services were in their infancy when Brinsmead joined the C.A.B. - who were soon, reluctantly, obliged to conduct surveys of prospective airports and runways all over Australia. This had been brought about by a fatal accident in Western Australia. That accident occurred on 4th December 1920 and involved the first carriage of air mail under a Federal contract which had been granted to Norman Brearley [later to become Sir Norman Brearley C.B.E., D.S.O., M.C., A.F.C., F.R.Ae.S.] The commencement of Brearley's airline operation is relevant to Buchanan's story. Brearley's air-fleet, which consisted of four Bristol aircraft, were lined up on a 300 yard strip on the banks of the Swan River, Perth and then set out on the 240 mile flight to Geraldton. In fact they were taking off from an unregistered runway without any legal authority to do so and yet they were carrying official mail! Norman Brearley was a very careful operator and each of his aircraft carried an engineer, Brearley was favourably impressed with one of his new pilots - a chap named Charles Kingsford Smith.

Brearley was at the controls of one of his aircraft and the outward journey was uneventful - the return leg was to prove otherwise. Shortly after crossing the Murchisson River the aircraft piloted by Len Taplin developed engine trouble and began to lose height - there was no known suitable landing site for him to use. A second aircraft, piloted by Bob Fawcett, followed him down in order to assist, but crashed in the process, killing both the pilot and the other member of the crew. Brearley blamed the C.A.B. for not having surveyed adequate landing strips beforehand, in which claim he was supported by his M.H.R. [Harry Gregory]. Shortly afterwards, the C.A.B. began an Australia-wide progressive survey of suitable sites for airports and landing strips.

During many of these early survey flights the crew consisted of Capt. E.J. Jones - the C.A.B.'s first Superintendent of Flying Operations, Lt. Colonel H.G. Brinsmead - First Controller of the C.A.B. and Bob Buchanan - who acted as both the flight & maintenance engineer. In 1924 these three men were the crew of the first landplane to fly around most of Australia. The purpose of the flight was not to establish a new distance record - but to inspect air routes which were either in existence or to survey possible new routes - many of those sites have been developed and are still in use today. The crew received nothing in addition to their standard salaries for their grueling feat - although sometime later a statue representing the three men was erected in one of the coastal towns on Australia's North West.

To appreciate the magnitude of their achievement, the first around Australia flight by air had only been completed on the 19th May of that year - some three months earlier. The crew on that occasion comprising of Wing Commander S.J. Goble and Flight Lieutenant MacIntyre with the journey taking forty-four days in elapsed time. Of that total there were twenty flying days with a total of ninety-three flying hours and their aircraft was a specially modified Fairey IIID. A10-3 floatplane. After the flight, the Australian Government awarded them, respectively, five hundred and two hundred & fifty pounds each. In 1924 they were also awarded the Britannia trophy to mark their achievement.

Note: Goble was a W.W. I "ace" as he had shot down at least five enemy aircraft and he later became an Air Vice-Marshal. Goble had started his military career as a Sub Lieutenant in the Royal Navy. Flt. Lt. MacIntyre was killed when the aircraft he was piloting crashed at the opening of Adelaide's Parafield Airfield. He was also involved in aerial survey work for the C.A.B.

The aircraft used for the C.A.B.'s round Australia flight was a De Havilland DH 50 which had been ordered at a cost of two thousand pounds [£2,000.00.00] and had only arrived in Australia on the 28th June 1924, It had been assembled and tested by the 30th June and registered as G-AUAB on the 31th July. No time was wasted and on the 7th August the aircraft and its crew had left Melbourne for their historic flight! The route taken by them may not seem very adventurous today, but in those days it most certainly was. It consisted of the following stages:-

Melbourne, Cootamundra, Narromine, Bourke, Cunumulla, Charleville, Longreach, McKinlay, Cloncurry, Camooweal, Brunette Downs Station, Anthony's Lagoon Station, Newcastle Waters, Katherine, Darwin, Victoria River Downs, Ord River, Wyndham, Ord Mulla Bulla Station, Fitzroy Crossing, Broome, Port Headland, Roeburne, Onslow, Carnavon, Geraldton, Perth, Kalgoorlie, Narethea, Cook, Wirraminna, Adelaide, Nhill and Melbourne.

In their trip around most of Australia, Jones, Brinsmead and Buchanan covered a distance of 7,590 miles [some record books give this figure as being 7,658] and took them from the 7th August to the 29th August of 1924. The aircraft was

fitted with a 280 h.p. engine and the only maintenance required during the trip were three inlet valve springs and two spark plugs.

Note: The C.A.B.'s flight by Jones, Brinsmead and Buchanan did not circumnavigate the Australian continent. Further, the aircraft registration G-AUAB was British because at that time Australia had not yet been allocated the prefix "VH" or "Victor Hotel". "G" was British, the letters "AU" had been reserved for Australasian aircraft. A new international convention on the registration of civil aircraft was adopted by the International Commission on Air Navigation in the June of 1924 and, on the 1st January 1925, all Australian civil, not State aircraft, then became identified by the now familiar "VH" prefix.

This successful flight survey team literally broke up when it was involved in a bad crash at Bourke, N.S.W. In that incident both Jones and Brinsmead were badly injured, Buchanan did not emerge unscathed either, he suffered severe damage to his jaw and a dislocated shoulder. However, Bob Buchanan did not report his shoulder injury until a week later, rumour has it that he was concerned that his accommodation allowance might have been affected if he had stayed in the hospital at Bourke!

In addition to the duties already mentioned, Bob Buchanan was also involved in the investigation of air crashes. This was long before the modern days of four wheel trucks or being winched down to a wreck from a helicopter. It is recorded that on one occasion an aircraft had crashed at a very remote location and the only means of arriving at the crash site was by camel. It will be appreciated that the smell of a camel in high temperatures can be a bit too much for some people, and to make matters worse the owner of the camels had treated his animals with his own patent anti-tick treatment. That treatment consisted of liberally smearing the beasts with used Castrol engine oil! The weather is reported as having been over the 120° Fahrenheit mark and it is understood that the smell of *Castrolised* camel was really one for the record books.

On another occasion the only suitable landing ground was about four miles from the nearest homestead and a string of horses was sent out for them to ride in on. Buchanan may have been a top-notch aircraft engineer - but he was no horseman and soon hit the ground. He is reputed to have remarked "I'm a bloody engineer not a so and so jackeroo."

As an engineer Bob Buchanan was also very practical, this can be illustrated by an incident which occurred during a flight from Longreach to Charleville when the aircraft in which he was travelling, an Armstrong-Whitworth, developed engine exhaust problems and began to shower the rear cockpit and fuselage with sparks and later flames! The pilot landed the aircraft as quickly as possible and Jock effected an emergency repair by emptying out the mail they were carrying from its asbestos lined mail-bag, soaked the bag in water and wrapped around the rear cockpit and fuselage to prevent any further chance of fire. *The hammer used in the repair was still in the possession of the Buchanan family when I interviewed Ian Buchanan in 1989.*

Following the incident, Buchanan wrote to Arthur Baird, the then Chief Engineer of Q.A.N.T.A.S., telling him that he would not be issuing any further Certificates of Airworthiness for that type of aircraft. He is then reported as stating that the best thing that QANTAS could do was to burn them! Shortly afterwards, by sheer coincidence, two of the Armstrong-Whitworth aircraft then operated by QANTAS were destroyed by fire on the ground.

John Davidson [known as "Johnny Davo"] of the Oaks near Camden, N.S.W., was a licenced aircraft engineer [L.A.M.E.] and a Civil Aviation Authority Certificate of Approval holder for aircraft maintenance. He was formerly a partner of "Syd." Marshal - an early figure in Australian aviation and the proprietor of Marshall Airways. Known as old "Syd" he also collected vintage aircraft and at one time had the only Messerschmidt Me. 109f in Australia as well as a Spitfire, a Japanese "Betty" bomber and many other historic aircraft. When I interviewed "Davo" in the early 1990's he recalled one incident involving Jock Buchanan and problems which the Australian aviation industry was having the fuel systems of the De Havilland "CERES MOTH" aircraft and had resulted in a number of fatalities due to loss of engine power owing to fuel starvation. The carburettor of the CERES MOTH had given no trouble in any other parts of the world - but in Australia it was a different story - all except for Marshall Airways!

The answer Jock received from Old Syd was not very technical and would certainly not impress today's crop of Public Service academics with their limited amount of practical experience in the aviation industry. Old Syd. told him that they had rammed a piece of broom handle through the filter, had not had any trouble since, and had not bothered to

probe any further into the matter! Further tests and checks by Jock revealed that the metal gauze filter was quite all right in the cooler temperatures of northern Europe where it had been designed, but for some reason in the elevated temperatures of Australia, the metal gauze, coupled with a slightly higher water content in the fuel available in Australia, developed a meniscus which restricted the fuel flow to the engine. Due to the gravity fuel feed system from the upper wing there could be no improvement possible in fuel pressure. Jock instituted a modification to introduce a different gauge of wire used in the filter and Buchanan had successfully struck again.

Note: From an Australian historical viewpoint, it is sad to note that the Messerschmidt Me.109f is no longer in this country. Following Old Syd's death, an unscrupulous individual made himself a considerably richer by exporting the aircraft in a crate which identified its contents as being "scrap aluminium"!

Whilst Jock was renowned as being a stickler for air safety regulations and requirements, he also knew when to turn a blind eye. However, there was never any case of ignoring safety standards where the safety of the public was involved. A friend of Buchanan's was carrying out illegal aerobatics over Sydney's Martin Place during the lunch hour to the delight of the crowd. Jock happened to be in the vicinity, duly noted the aircraft's registration and the next time he saw his friend was in court.

There are many interesting and amusing incidents involving Bro. Bob Buchanan, unfortunately there are too many to be recounted in the time available for this short address. Therefore it is something of a surprise to many to find that this man who had dedicated his life to aviation safety and aircraft engineering did not finish his working life in aviation. It is even sadder to record the reasons behind his resignation from the Department, of which he had been a member, and, on which he had had such a strong influence in the key area of airworthiness. Once again, as with his leaving the R.A.A.F. in 1922, it was to Jock a matter of principle - only this time it was directly related to air safety - one on which he felt that he could not compromise his standards. He held to his position in spite of pressures from, and, a lack of support of, his superiors in the Branch. From my own experience, things had changed very little in this respect in the intervening fifty years or so.

The weight and balance of an aircraft is an area of great importance to its safe operation. During 1932 Buchanan became aware of a situation involving an airline operating in New South Wales, who were, according to the information received, breaking the safety regulations and placing persons & property in danger by grossly overloading their aircraft. It was extremely for Bob Buchanan to obtain any evidence on which to proceed as the company had reached an accommodation with its flight crews by paying them bonuses and the ground crew staff were also receiving favourable working conditions in return for their silence. Somehow Buchanan managed to obtain the permission of the acting Controller of the C.A.B. to conduct a secret investigation. At the time Colonel Brinsmead, its nominal head, was seriously ill arising injuries which he had sustained in a crash during 1931 whilst involved in testing an experimental aerial service exercise. He died in 1934 from those injuries.

The results of Buchanan's enquiries revealed that the weight & balance figures were quite fictitious as specially manufactured miniature radiators and fuel & oil tanks were being fitted inside the normal aircraft components to give them the appearance of being full at the time of weighing. The apparent weight saved was then used to "legally" carry extra cargo. When the weighing had been completed under Departmental supervision, as in the "old" days, the real tanks, etc. were refitted and filled to their capacity. When Buchanan had collected and assembled all his evidence, he presented it to the Air Operations Branch and awaited results on such a clear cut case. Nothing happened for quite a while and, when it became clear that his superiors within the "old boy network", did not view the situation with the same concern with which he did, he pursued the matter further without avail, and, finally resigned from the C.A.B. in disgust with the matter still unresolved.

Several months after his resignation the C.A.B. was at last obliged to take action against the offending airline, and, finally to withdraw its operating licence. Whilst this action may have appeared to vindicate the position of Bob Buchanan, he never returned to the industry he had helped to establish, in this country, during the period of 1922 to 1933.

There were very few jobs to be had in the aviation industry during the economic depression of the 1930s for someone who always wanted to do things the right way and not take economically dictated "short-cuts". Buchanan was unemployed for several months before he started work with the New South Wales Government Railways [NSWGR] -

Signals Division during their electrification programme and remained with that organisation until 1952 – two years before he should have retired. He then became a victim of a general reduction in staff levels during a minor economic recession. During that time he had been president of the Railway Salaried Officers Association and had been made a honorary life of that organisation. Some months after being “laid off” by the N.S.W.G.R. he accepted an offer from the Queensland State Railways to assist them in their signal electrification programme. On his return to Sydney he started work in the drawing office of a firm at Brookvale [Eberay] specialising in pumps and was associated in the design of an early form of heart/lung machine under the direction of Professor Baxter – who later joined the Australian Atomic Energy Commission.

With a change in the style of Bob Buchanan’s employment a more settled style of social life would have developed. At that time the Buchanan family was living in Chatham Road, West Ryde. It is quite likely that during his employment with the N.S.W.G.R. he would have come in contact with some members of the Craft, for, on the 17th April 1937, at the age of 47, he affiliated with Lodge West Ryde N° 453 U.G.L. of N.S.W. This was some twenty-one years after he had called off from Lodge Charleville! His proposers into Lodge West Ryde were Wor. Bro. E. Swinnerton and Bro. C.S. Metcalfe. Whilst he was a member of Lodge West Ryde he did not hold any office.

In 1989, the Secretary of Lodge West Ryde, Wor. Bro. L.C. Slade, researched his lodge’s records for me and advised that on Bro. Buchanan’s application for membership, his previous Grand Lodge certificate is recorded as being N° 9021, whilst the number of his English Constitution Master Mason’s certificate was recorded in 1915 as being N° 13226. It would therefore appear that Buchanan had remained unattached from the date of him having called off on the 4th May 1916 - as a consequence of his joining the A.I.F. It is therefore possible that he was issued with a new certificate owing to having been an unattached member of the English Constitution in the Queensland area when the U.G.L. of Queensland was erected on the 21st April 1921 – if a new numbering system was introduced at that time. This anomaly in respect of Buchanan’s Masonic registration was not pursued.

In the August of 1937 the Buchanans’ again moved, this time to Clifford Road, Fairlight, and, eventually Bro. Jock Buchanan called off from Lodge West Ryde and affiliated with Lodge Port Jackson N° 387 U.G.L. of N.S.W. There is little recorded of his activities with that lodge, once again he did not seek office and is only remembered as being “the Brother who came to lodge by ferry”. He remained with Lodge Port Jackson until at the age of 54 years, he called off from Freemasonry for the final time. All of his contemporaries in Lodge Port Jackson have, by now, passed on and there are no further sources of information to be explored in regards to his Masonic career.

In the course of an interview with Bro. Ian W Buchanan of Lodge Balgowlah in the November of 1989, I learned that despite Bob Buchanan having left the aviation industry somewhat malcontented, he still retained much of his interest and technical knowledge of the subject. Old Bob, as he now was by now, was always willing to assist anyone genuinely interested person in their studies of aviation. One who so benefited in his technical studies in aerodynamics in order that he might become a pilot was a young neighbour of his – Jack Todd. This young man was later to become a Squadron leader flying Catalina flying boats with the R.A.A.F. Unfortunately, Jack Todd’s aircraft was shot down in the area of the Sundra Straits and he died in a Japanese prisoner of war camp.

Note: The son of Bro. Robert Hill Buchanan is Bro. Ian W. Buchanan, a resident of Balgowlah. Bro. Ian’s lodge membership therefore makes three consecutive generations of this branch of the *Buchanan Clan* having been Freemasons – but only one was a member of the Scottish Constitution.

Bad health affected Jock Buchanan towards the end of his life, but, after several operations for cancer, he returned to the workforce and was employed in the drawing office at Malley’s. It is reported that old Bob saw, from the roof of Malley’s, the first Boeing 707-138 en route from Seattle to Kingsford Smith Airport, Sydney. It was a far cry from those magnificent men in their flying machines whom he had first seen at the air-show in Lanarkshire back in 1910 and which had awakened his life-long interest in aviation. He continued to work until shortly before his death at the age of seventy-two years in his home at Manly on the 9th February 1961.

With the passing of Robert Hill Buchanan, not only had Australia lost one of its early aviation pioneers – but also the last surviving member of that historic first flight by land-plane around Australia. He was possible unique in that he had received a honourable discharge from all of Australia’s military aviation services. In addition, the system of basic examinations which he introduced for the licencing of Aircraft Maintenance Engineers – basically remains in place in spite of minor cosmetic changes and necessary updating. Therefore it might be said of our late Brother Bob that in

aviation he was one who tried, professionally, to live by the Working Tools of an Entered Apprentice Freemason i.e. knowledge - grounded on accuracy, aided by labour, and , sustained by perseverance will in the end overcome all difficulties, raise ignorance form despair and promote happiness in the paths of science.

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