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From Aero Clubs to Aviation Companies: the experiences of Thomas Macleod and his contemporaries 1910–1919

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Rapid developments undertaken by a number of ambitious and adventurous Queenslanders are summarised by Major Thomas Macleod in his article 'Flying in Queensland: Early Difficulties', a typed manuscript in Queensland Museum's Thomas Macleod Queensland Aviation Collection. Writing on 7 September 1919, Macleod reflected on his and others' initial experiments with aircraft in Queensland, noting that 'flying at the present day has been so far advanced by the experience gained during the war'. Macleod's article, along with other photographs and documents housed in the archive named in his honour, provide a significant overview of the development of aviation in Queensland. This paper presents a summary of some of the aviators, events and connections mentioned by Macleod and represented in the collection from 1910–1919. Further investigation will offer a summary of individuals and activities during the following decades.

❑ aviation, Thomas Macleod, Queensland Museum

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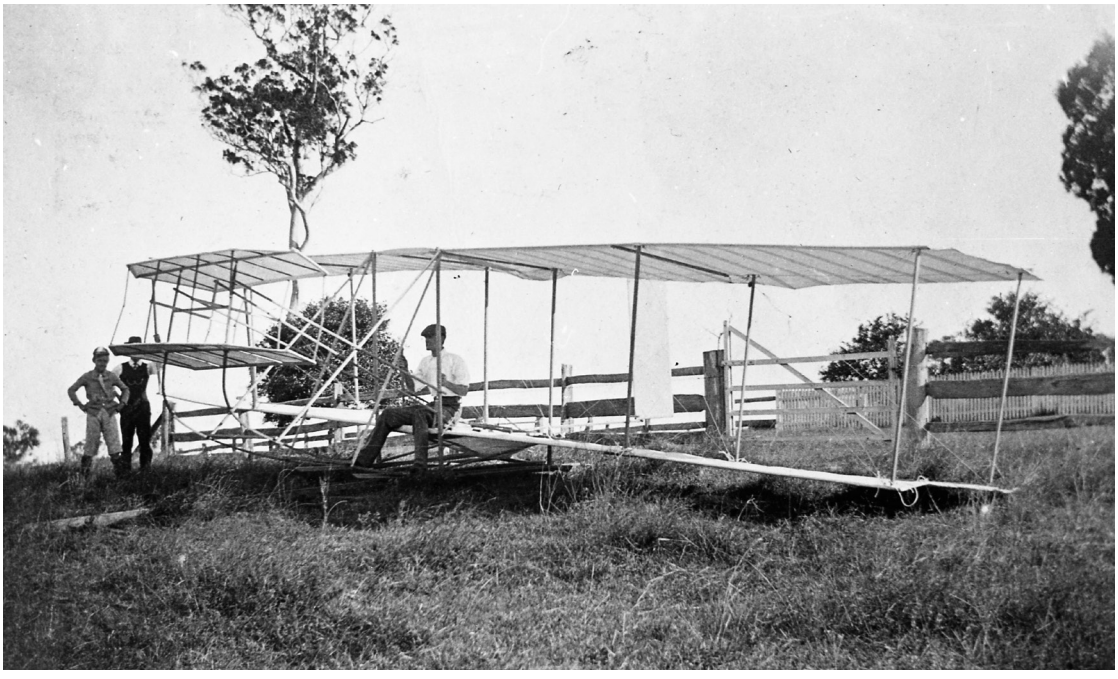

FIG. 1. Macleod in his biplane glider, 1910. Thomas Macleod Queensland Aviation Collection, Queensland Museum.

GETTING OFF THE GROUND

When Americans Wilbur and Orville Wright made their first successful aeroplane flights on 17 December 1903, they excited a generation of young men across the world to do the same. While others had developed similar and contributing aircraft, including Australia's 'Father of Flight' Lawrence Hargrave, it was the Wright brothers' design that was endorsed and promulgated. In Australia many aspiring aviators took to their drawing boards and workshops to develop gliders and vehicles that would match the same form and function that the Wright brothers had achieved.

In April 1909, the Aerial League of Australia was founded in Sydney by George A. Taylor and other like-minded individuals, including Hargrave, with objectives to 'watch the latest achievements in Aerial Engineering; secure best recognition for Australian efforts in that direction; awaken public attention to the grave danger in allowing foreign nations to excel in Aerial Navigation; and to join forces with the Aerial League of the British Empire' (Craddock 1999, p. 23). Soon after, the Commonwealth government offered a prize of £5 000 for the invention and successful flight of a flying machine for military purposes before the end of June 1910, subject to extensive conditions (Craddock 1999, p. 35).[1]

George Taylor, journalist and inventor, then established the first Australian aeroplane factory, in Surry Hills, Sydney, while continuing to extol the possibilities of aviation to government officials and the wider community. He developed a number of successful kite and glider designs with the assistance and invention of other members of the League, including Harry Williams, Frank Peacock and Edward Hallstrom (Craddock 1999, p. 47–51). The group experimented with shape and materials, building models and human-carrying kites and gliders. Taylor's intention was to fit a suitable engine to one of his gliders in an effort to secure the government prize and further investment in aviation technologies.

On 5 December 1909, at Narrabeen Beach in Sydney, Taylor made a series of flights in his biplane glider, the longest being 110 yards (just over 100 metres), recorded as the first successful heavier-than-air flight in Australia (*Sydney Morning Herald,* 7 December 1909, p. 3). On the same day, Taylor's wife Florence became the first woman to make a successful heavier-than-air flight when she too had a test of the glider. That glider was subsequently crashed in further test flights during January 1910, and the monoplane glider intended as his entry for the government prize was never fitted with an engine (Craddock 1999, p. 84).

Taylor's plans for powered flight were unsuccessful and ultimately the government prize was not awarded. However, during the first six months of 1910, several powered aircraft were imported for public exhibition and flown by Colin Defries in Sydney, Fred Custance in South Australia, and Harry Houdini at Digger's Rest, Victoria. The first Australian to design and build a powered aircraft, John Duigan, had a successful flight at Mia Mia, Victoria on 16 July 1910. Soon after, C.W. Mackay of Dulong, Queensland, and Auriol Baker of Cloncurry, Queensland, patented inventions for flying machines (Gunn 1988, p. 8).

Born in Brisbane in 1881, Thomas Macleod, barrister and yachting enthusiast, began experimenting with his own gliders (figure 1) in 1910 (Gill 1986). Reflecting in his 1919 article, Macleod stated 'It is impossible for the public to realise the tremendous difficulties which had to be overcome by the pioneers of flight, men such as the Wright Brothers, the Farman Brothers, Bleriot, and the others whose names will go down in history' (Macleod 1919:1). Macleod's experiments in with gliders were similar to his contemporaries, testing design and materials, and developing skills in handling the aircraft through trial and error. He provided this summary of his gliding experiences:

> These are simply aeroplanes without engines and they were controlled almost exactly as are the aeroplanes of today, but they could only be used down a hill up which there was a steady wind blowing and by

> being given an initial impetus by means of a run down a starting rail they obtained their support in the air by travelling down the hill against the breeze. There was a good deal of risk about this work and several pioneers such as Lilienthal and Pilcher were killed during gliding experiments. I first used a monoplane glider like a huge moth. It was crude in design and the balance had to be maintained by moving the weight of the body, a very ineffective and dangerous method of control. I had several minor 'crashes' on this glider and I then built a biplane, thirty feet in span, modelled somewhat on the Wright Brothers' design, with controllable planes, elevator and rudder. I achieved a good deal of success with this glider at Oxley, but the first time I tried it, it turned upside down in the air as soon as it left the lower end of the starting rail, and it landed upside down at the top of the slope above where I had started from! It took me three days to repair the damage and I was fortunate in having no more crashes. On the last day I used this glider I did about fifteen trips down the slope, landing on hard stony ground without damaging the skids or the machine in the slightest. (Macleod 1919, p. 1)

Macleod made the first officially observed flight in a monoplane glider in Queensland on 11 October 1910. Varying reports by Macleod and others place the event at either Sinnamon Park or Herston Heights (figure 2).

During 1910, he met with numerous emerging aviators and enthusiasts, each learning from the others work and collaborating on projects. Macleod concludes this first chapter of his story with a fitting summary of makeshift nature of Queensland aviation in 1910: 'The constructional difficulties here before the war were very great as no parts or fittings could be procured and one had to make or improvise everything required.' (Macleod 1919, p. 1) Within this setting, Macleod and his contemporaries launched a series of new enterprises in the years before the First World War.

FIG. 2. Thomas Macleod leaving the ground, in his monoplane glider, possibly during the first time a heavier than air machine took to the air in Queensland. Thomas Macleod Queensland Aviation Collection, Queensland Museum.

A QUEENSLAND AERO CLUB

In May 1910, Charles Lindsay Campbell, having arrived in Queensland from Western Australia, displayed a monoplane and two biplane gliders at the Longreach Agricultural and Pastoral Show (Parnell and Boughton 1988, p. 11). In June, Campbell formed the Queensland Aero Club in Brisbane. Macleod wrote, 'Campbell was very keen on the problems of flight and did his best to promote public interest in the subject of flight' (Macleod 1919, p. 1). The Club hosted a number of lectures and exhibitions, and Sir William MacGregor, Governor of Queensland accepted the appointment as patron of the Club. One of their most successful exhibitions was an 'Aviation Court' at the National Show in Brisbane. There the Aero Club displayed 'models of monoplanes, biplanes and other 'curious structures', gliders and an aero-marine monoplane' (Craddock 1999, p. 102) (figure 3). In September, the Club held a model making competition, with first prize equally divided between Thomas Macleod with his Glen-Curtis American biplane and H. Le Bas for his Wright-Farman biplane (The *Brisbane Courier*, 1910, p. 5).

Campbell travelled to England in 1911 and attended the Bristol school where he qualified for his pilot licence. In August 1912, he was flying a Bristol monoplane at Brooklands when the machine 'dived about 200 ft' straightening out until a second dive followed and the aircraft 'struck the ground' fatally injuring Campbell and making him the first Australian killed in an aeroplane accident (Flight 1912, p. 852; Parnell and Boughton 1988, p. 11).

FIG. 3. Thomas Macleod in the Queensland Aero Club's experimental glider, Brisbane, 1910. Thomas Macleod Queensland Aviation Collection, Queensland Museum.

The Queensland Aero Club did not continue in the same way after Campbell's departure. Instead, Macleod 'formed a Queensland Branch of the Aerial League of Australia in 1911, and a few enthusiasts used to rally at regular intervals in order to try to carry on some pioneering work' (Macleod 1919, p. 1). Several members made their own gliders, including R.G. Bowen, Herbert G. Smith, William Fraser, and Valdemar Rendle, though according to Macleod none were flown. Herbert (Bert) Hinkler built several gliders at Bundaberg and attended a number of the group's meetings in Brisbane (Macleod 1919, p. 2) (figure 4).

Late in 1911, Macleod travelled to England via Sydney and Melbourne, taking every opportunity to connect with others working in aviation. In Sydney, he was 'one of the Committee that was appointed by the Aerial League of Australia to observe the flights of W. Hart for the first Aviator's Certificate to be granted in Australia'. And in Melbourne, 'I agreed to report gratis to the Commonwealth Defence Department on the aeroplanes in use in England and after an interview at the War Office in London, I spent some time at Larkhill, Salisbury Plains, at the R.F.C. Flying Ground and the Bristol Flying School' (Macleod 1919, p. 2). Macleod returned to Australia with increased experience and further contacts in the industry, viewing the first flights of powered aircraft in Queensland, by visiting American Arthur B. Wizard Stone at the 1912 Brisbane Exhibition and Arthur W. Jones, who completed a flying tour during 1913 in his Caudron biplane.

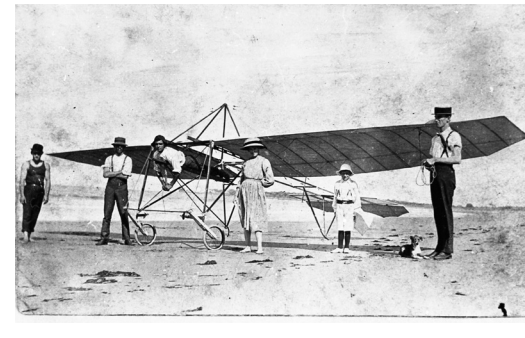

FIG. 4. Bert Hinkler in his glider, Bundaberg, c. 1911. Thomas Macleod Queensland Aviation Collection, Queensland Museum.

QUEENSLAND VOLUNTEER FLYING CIVILIANS

Macleod wrote, 'when the war broke out in 1914, I formed a small contingent of volunteers, called the Queensland Volunteer Flying Civilians' (Macleod 1919, p. 2). He was joined in the venture by members of the Queensland branch of the Aerial League of Australia, formerly the Queensland Aero Club. Valdemar Rendle was a key supporter and contributor to the project, and generally recognised as the co-founder of the Queensland Volunteer Flying Civilians.

Working in Brisbane at the St Paul's Presbyterian Church Hall, 'which was lent for the purpose,' the Queensland Volunteer Flying Civilians constructed an aircraft with 'Caudron-type wings', powered by a '35 hp Anzani, inverted Y type' (Flight 1916, p. 100). Macleod claimed that they had 'built the first engined monoplane ever constructed in Queensland' (Macleod 1919, p. 2). Although that claim was somewhat tenuous, the standard of work achieved did earn the group some acclaim from the press and public.[2] The group took the aircraft to Hemmant, Queensland, where 'the only available ground was an unsuitable paddock' and a number of test flights were made with Macleod as pilot (Macleod 1919, p. 2). The aircraft was christened 'The Courier', after the Brisbane newspaper which had raised funds for the project through subscriptions, in a small ceremony where Macleod's sister 'broke a bottle of Minchinbury champagne over the propeller' ('Queensland's first aeroplane', *The Brisbane Courier*, 23 November 1915, p. 7) (figure 5).

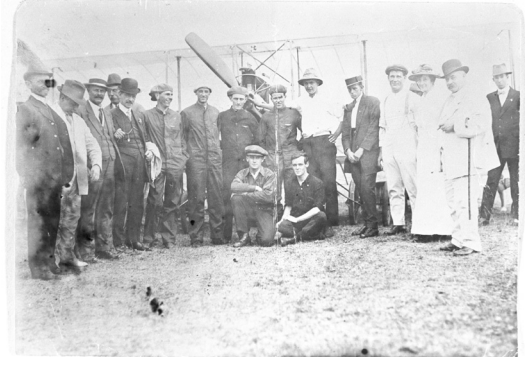

FIG. 5. As provided in text accompanying the photograph: Ernest Handley (6th from left, overalls), Thomas Macleod (7th from left, overalls), William Fraser (8th from left, overalls), Herbert Smith (9th from left, overalls), Val Rendle (10th from left, white shirt), David Stitt (next to Rendle), George McCallum Cherry (4th from right, white shirt, white pants), Blane Macleod (next to George, Tom's sister), Hugh Davis (kneeling, no cap). It is uncertain whether the woman in the photograph is Macleod's mother, Blane, or the sister who christened the aircraft. Thomas Macleod Queensland Aviation Collection, Queensland Museum.

The main purpose of the group's work was to train and prepare for war service. Each of the members of the group had 'signed to go on active service if required' (Flight 1916, p. 100). Late in 1915, Macleod organised for the majority of the Queensland Volunteer Flying Civilians to travel to England and volunteer to join the Royal Flying Corps (R.F.C.). All members of the group were accepted, some starting in mechanic roles before earning their wings. Macleod gave the following account of their war service:

> Those who worked on this machine and went to England for service with the R.F.C., were Herbert H Turk (Lieutenant, awarded Military Cross, killed), Ernest Hendley (Sergeant Pilot, awarded French Croix de Guerre with palm, killed), Herbert George Smith (wounded, awarded D.C.M., permanently discharged), William Fraser (Lieutenant, killed), George McCallum Cherry (Sergeant Pilot, now lieutenant and permanently unfit as pilot), and Valdemar Rendle (Sergeant Pilot, now Lieutenant). In addition, David R Stitt and Percy W Snell, although they had not worked on the Brisbane machine, went to England as members of the Q.V.F.C. and joined the R.F.C. (Macleod 1919, p. 3)

Macleod himself was commissioned as a second lieutenant in March 1916, qualifying for his wings on 17 June 1916 (Macleod c.1919, p. 1) (figure 6). After completing his training, Macleod joined 'No. 13 Squadron, with a period in command, and was awarded the Croix de Guerre avec Palme for his work as an aerial observer in the 1st battle of Arras and at Vimy Ridge' (Gill 1986). He was 'invalided

to England in a serious condition on 16/4/17 owing to heavy fighting after influenza and Bronchitis contracted in February 1917' (Macleod c.1919, p. 1). Macleod returned to service on light duties, but was soon involved in a heavy schedule training pupils in Doncaster, and he returned to hospital when his illness recurred 'through stress of service' (Macleod c.1919, p. 1). He was graded unfit for flying, appointed Commandant No.2 Wireless School R.F.C. and took on other roles in England and France before being demobilised and awarded O.B.E. in 1919.

FIG. 6. Thomas Macleod in R.F.C. uniform, c.1915. Thomas Macleod Queensland Aviation Collection, Queensland Museum.

FLYING OVER THE FRONT

Aerial warfare was developed during the First World War. The experimenting and advances that had begun only in the decade prior, continued as the war progressed, engaging new recruits, new ideas and new theatres of war. Several hundred Australians served with the Royal Flying Corps (R.F.C.), the Royal Naval Air Service (R.N.A.S.), and the amalgamated Royal Air Force (R.A.F.), formed in April 1918. Over 3 700 men also served in the Australian Flying Corps (A.F.C.), established in 1914 (Molkentin 2012, p. xviii). Many transferred from other battalions and units in the Australian Imperial Force (A.I.F.) during the war, when 'competition to get out of the trenches and into the A.F.C. was stiff' (Molkentin 2012, p. 30). The Australian aviators observed, trained and served with flyers across Europe and the Middle East, encountering new aircraft, flight patterns and navigational methods.

Like Macleod and the Queensland Volunteer Flying Civilians, a number of aviators and aviation enthusiasts aimed to enlist with one of the flying corps in the early stages of the war, and travelled to England to train and earn their licence. Herbert 'Bert' Hinkler travelled to England before the war and landed a job at the Sopwith Aviation Co Ltd in 1914. He enlisted with the R.N.A.S. in September 1914, progressing as a skilled observer and gunner, though he did not get a chance to train as a pilot until the end of 1918 (Wixted 1983). Hinkler had great ambitions to fly after the war, pursuing numerous opportunities before being the first person to fly solo from England to Australia in 1928.

Stanley Dallas, born in 1891 at Mount Stanley station near Esk, Queensland, observed with interest the activities of the Mount Morgan branch of the Queensland Aero Club, established there by Charles Lindsay Campbell in 1911. He built a glider and experimented with a sea-plane before paying his own way to England in 1915 to join the R.N.A.S. (Wixted 1981). Dallas was a flight sub-lieutenant with No.1 Squadron, R.N.A.S., and then lieutenant-commander before becoming major commanding No.40 Squadron in the newly formed R.A.F. (Wixted,

1981) (figure 7). He was credited with 39 victories, placing his tally as an Australian 'ace' second only to Robert Alexander Little (No. 1 Naval Wing, No. 8 Squadron RNAS, No. 203 Squadron RAF).

Dallas' logbook for his flights during 1915 and 1916 in the Thomas Macleod Queensland Aviation Collection records his training in England and then flights over France. On 17 June 1916, after a 1 hour and 10 minute flight in a Nieuport 11 aircraft, serial no. 3994, he reached 13 500 ft, and wrote: 'Accompanied French Reconnaissance to B Ranges. Had some hot fire on way back one of those occasions when one wishes the Wright Brothers had never invented aeroplanes. Was rather deaf from the shells got a few holes in my wings and chased a Hun over Ostend' (Dallas 1915–16). Dallas recorded numerous insights during these reconnaissance and flighting patrols, finding different aircraft more manoeuvrable and reliable in each 'scrap'.

The collection also includes letters written by Dallas to the Lundager family in Mount Morgan. Early in his training, Dallas wrote 'I can say for flying that it is a new life most thrilling' (Dallas 22 June 1915, p. 2). After his promotion to commanding officer, Dallas wrote 'I am very proud of this flight, an Australian, a Canadian and four Englishmen all as keen as mustard together' (Dallas 30 August 1916, p. 5). Dallas sought advantageous position in his encounters with enemy aircraft, using clouds, mist and altitude to his gain, noting 'it is very nice to know that one has machines that will go up to almost any height, however, high enough to know that there is nobody ready to dive on you from above' (Dallas 19 November 1916, p. 2). His letters also included keen interest in flying home to Australia and pursuing aviation after the war.

Dallas was awarded a Distinguished Service Cross, Distinguished Service Order, a Bar to his D.S.C., the Croix de Guerre avec Palme and a mention in

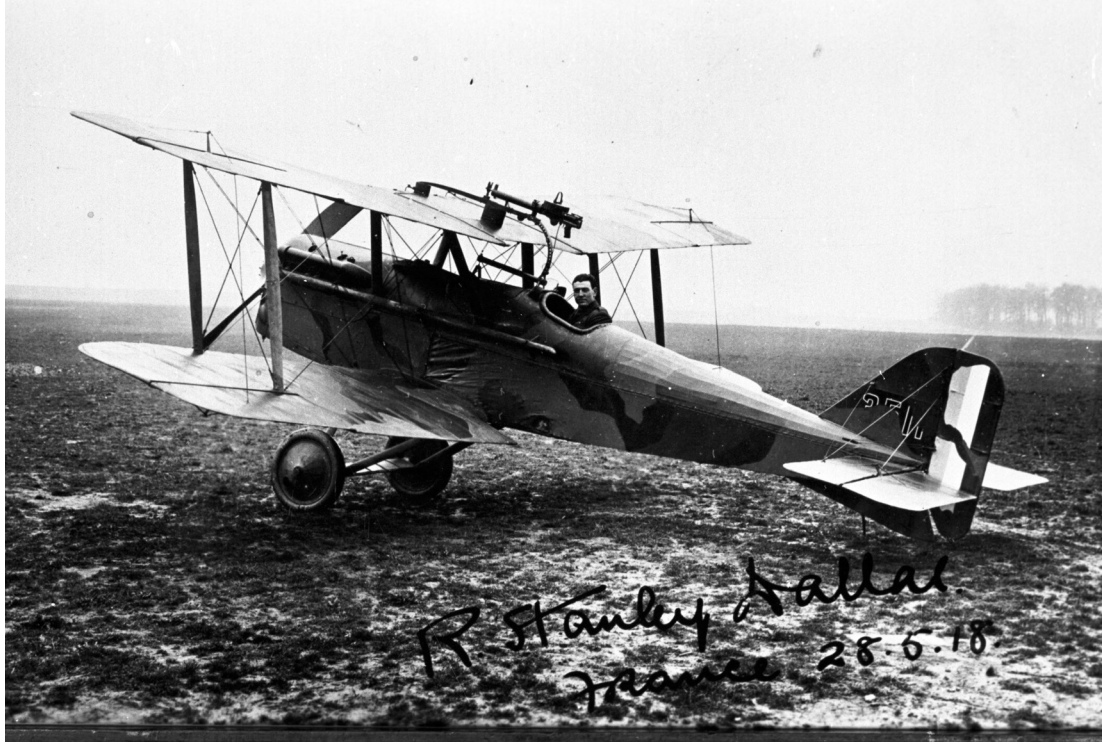

FIG. 7. Sub Lieutenant Roderic Stanley (Stan) Dallas in the cock-pit of the SE 5A British fighter aircraft is, No 1 Squadron, Royal Naval Air Service (R.N.A.S.). Thomas Macleod Queensland Aviation Collection, Queensland Museum.

FIG. 8. Military medals awarded to Stanley Dallas, Queensland Museum.

dispatches (Wixted 1981) (figure 8). He was also proud to be awarded the gold medal of the Aero Club de France (1918) and the medal of merit and honor of the Aero Club of America (1917). On 1 June 1918, 'while patrolling over the lines near Liévin, Dallas went to the assistance of another pilot' and was shot down by three triplanes (Wixted 1981). His death was widely reported and an editorial tribute in British magazine Aeroplane claimed: 'To be in Dallas' squadron was quite one of the highest honours open to a young fighting pilot of the RNAS and the high reputation held by certain of the RNAS squadrons operating with the RFC during the past year or two has been largely due to the training, example and leadership of Roderic Dallas' (The Aeroplane 1918). Australian tributes include 'Dallas Place' in Scullin, Australian Capital Territory, the Toogoolawah airfield, and a water reservoir named in his honour at Mount Morgan (Hellwig 2006, p. 181).

Born in 1897 in Brisbane, Charles Kingsford Smith enlisted with the A.I.F. in February 1915, serving at Gallipoli and in Egypt and France before transferring to the R.F.C. in October 1916 and flying with No. 23 Squadron in France (Howard 1983). Kingsford Smith 'was awarded the Military Cross – he had brought down four machines during his first month at the front and done valuable work in attacking ground targets and hostile balloons' (Howard 1983). Badly wounded, Kingsford Smith continued serving in the R.F.C. as a flight instructor. Kingsford Smith became a member of the Queensland Aero Club after the war, making significant contributions to world aviation, primarily through his long-distance flights and business venture, Australian National Airways, with partner Charles Ulm.[3]

Howard Bowden Fletcher, also a significant figure with the Queensland Aero Club after the war, enlisted with the A.I.F. in January 1915, serving with the 12th Light Horse Regiment. He transferred to the A.F.C. and flew as an observer in 1st Squadron. Fletcher was awarded a Distinguished Flying Cross for an encounter flying with pilot Paul McGinness on 24 August 1918. An account of that particular aerial dogfight is given in Michael Molkentin's 'Fire in the Sky':

> The German flight leader, distinguished by the red loops around his fuselage, came straight at McGinness's machine, but broke away when met with hot fire from Fletcher in the back seat. Two others followed, and Fletcher's well-aimed bursts saw them off too. The remaining three German scouts shied away, and gave McGinness a wide berth as they dived past. He set off after the middle one, pressing the firing button at 45 metres range. It rolled and spiralled down trailing smoke, exploding as it hit the ground. McGinness then chased another one down to 200 feet, firing as its frightened pilot attempted to land on a road. The German scout lurched and collided with a truck. As they zoomed past, Fletcher gunned down the pilot, as he struggled from the wreck. (Molkentin 2012, p. 147–148)

According to fellow 1st Squadron observer Hudson Fysh, on that occasion: 'I was sick, and Bowden Fletcher took my place as his [McGinness's] observer... much to my disgust at missing the show' (Fysh 1965, p. 52).

Fysh and McGinness flew together on numerous missions. Born in Launceston, Tasmania, Fysh had enlisted in the Australian Light Horse in 1914, and transferred to the A.F.C. in 1916. He won a Distinguished Flying Cross for his service as an observer, and completed his pilot training at Heliopolis, Egypt, in February 1919 before returning to Australia. Born at Mortlake near Warnambool, Victoria in 1896, McGinness similarly enlisted in 1914,

but did not join the A.F.C. until 1918, having trained with the R.F.C. He finished his service with seven recorded victories, having received a Distinguished Flying Cross for his daring flying, as reported, with Howard Fletcher.

In a letter home, McGinness reflected, 'If a man had a great deal of experience in it here, after the war he might follow it up … if not in the military, perhaps as a profession' (Fysh 1965, p. 62). Fysh and McGinness looked to continue their successful flying partnership after the war. As Fysh wrote, 'McGinness and I always worked as a close team in our B.F., with perfect understanding on tactics, and indeed this formed the basis of our work in the formation of Qantas when we returned to Australia' (Fysh 1965, p. 60). Fysh and McGinness, together with grazier Fergus McMaster, formed the Queensland and Northern Territory Aerial Services Ltd (Q.A.N.T.A.S.) in 1920 and joined by their former flight sergeant Arthur Baird.[4]

INVENTION AND INGENUITY

Australian aviators were at the forefront of developments in the technology, tactics and training of aerial warfare. Some had a background in mechanics and engineering, though many others had come from accounting, business and unrelated professions, learning their new work through field training and experience. Queensland's Bert Hinkler was credited with a number of inventions during the First World War, including 'an improved dual-control

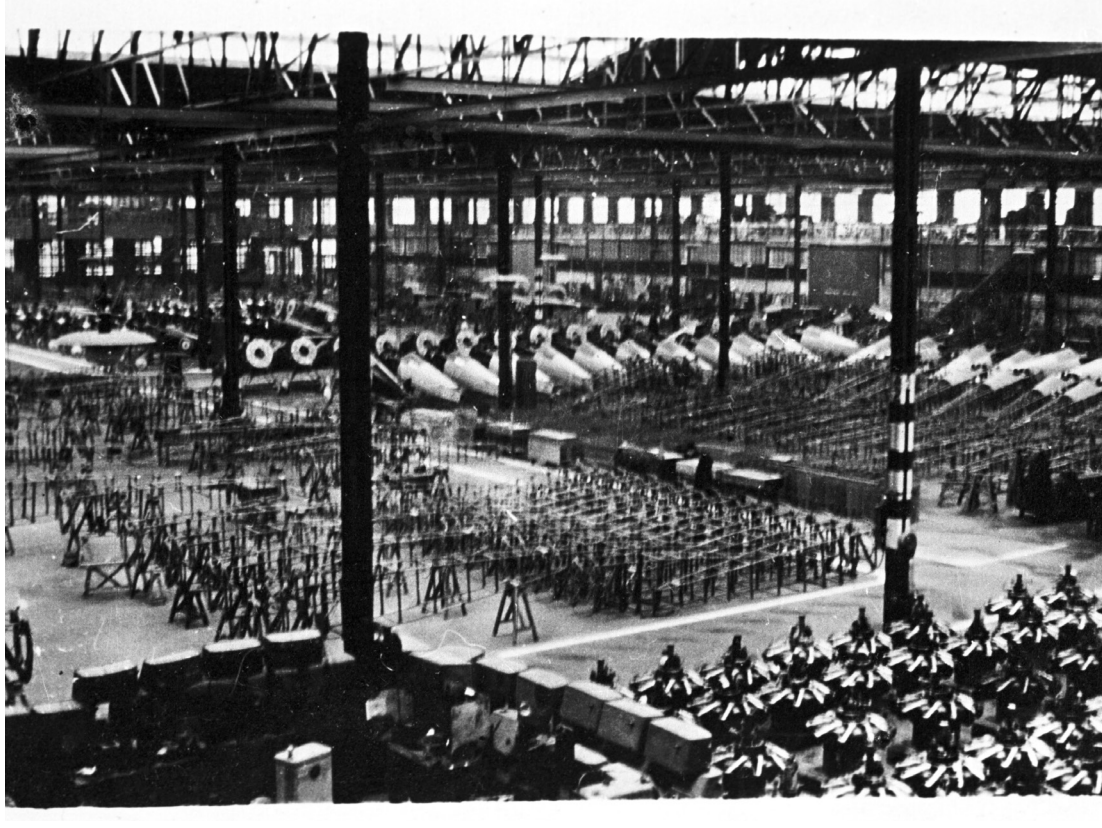

FIG. 9. Sopwith aircraft factory, c.1918, where a number of Australians were employed before and during the First World War. Thomas Macleod Queensland Aviation Collection, Queensland Museum.

system which enabled the gunner to relieve a disabled pilot' (Wixted 1983). Military aviators were involved in the repair and maintenance of their own aircraft, working with ground crews on the warfront to keep their vehicles in the air. Under challenging conditions, in open cockpit aircraft and with few navigational aids, they carried out bombing raids, aerial dogfights, and reconnaissance.

Melbourne mechanic Harry Kauper travelled to England in 1911 and found employment at the Sopwith Aviation Co. in 1912, along with Harry Hawker, becoming foreman of works (Fielding 1983) (figure 9). One of his inventions was the Sopwith-patented interrupter gear which synchronised the firing of a machine-gun through a rotating aircraft propeller. After the war, Kauper briefly operated a commercial aviation company in South Australia with fellow returned serviceman Harry J. Butler, but after going into liquidation concentrated on his work in radio engineering. Amongst his many achievements, Kauper worked with Rev. John Flynn before introducing him to Alfred Traeger, who developed the pedal wireless as part of Flynn's Aerial Medical Service, ultimately the Royal Flying Doctor Service.[5]

Born in 1894 near Bowen, Queensland, Frederick Sidney Cotton was appointed temporary flight sublieutenant in the R.N.A.S. in 1915, flying Channel patrols and then bombing missions over France and Germany (McCarthy 1993). A caption on the back of a photograph in the Thomas Macleod Queensland Aviation Collection (figure 10), reads 'My Sopwith 1½ Strutter. As a result of flying this plane I invented the Sidcot flying suit'. During winter 1916, Cotton observed that his oily overalls were good protection against the cold when flying in an open cockpit. He had a tailor make a water and wind proof suit to his design, with a lining of fur and silk. Registered as the 'Sidcot Suit', his invention was subsequently manufactured for aviators around the world and worn, in variations, through to the 1950s (figure 11). Cotton is also well-known for his contributions to the development of photograph reconnaissance and aircraft camouflage during the Second World War.

FIG. 10. Handwritten back of photo – 'My Sopwith 1½ Strutter. As a result of flying this plane I invented the Sidcot flying suit.' Thomas Macleod Queensland Aviation Collection, Queensland Museum.

FIG. 11. Sidcot flying suit worn by Sergeant Tom Kay while a competitor in the 1919 Air Race from England to Australia. Donated by John Kay, H9984 Queensland Museum.

Townsville-born Lawrence Wackett, graduated from the Royal Military College, Duntroon, in June 1915 and was transferred to No.1 Squadron A.F.C., arriving in Egypt in April 1916. According to Alex Post (2012), Wackett's success in his work in repairing and overhauling Royal Flying Corps aircraft 'resulted in his being mentioned in despatches (1917) and posted in April to the Orfordness Experimental Station in Britain.' Wackett was credited with perfecting a method of dropping ammunition to ground forces by parachute, and was awarded the Distinguished Flying Cross in 1918 and the Air Force Cross in 1919. After the war, Wackett was appointed to the Royal Australian Air Force at its formation in 1921. He qualified as an aeronautical engineer and designed and built experimental aircraft. In 1936, Wackett began managing the operations of the newly formed Commonwealth Aircraft Corporation Pty Ltd at Fishermen's Bend, Melbourne, which during the Second World War manufactured 755 Wirraways, 200 Wackett trainers, 248 Boomerang fighters and 59 Mustang fighters.[6]

RETURN TO AUSTRALIA

By the end of the war, thousands of Australians were trained in aviation, as pilots, mechanics and ground crew, looking for ways to apply their new professions without an established industry to support them. As Fysh (1965, p. 66) states 'I now found myself at home and one amongst tens of thousands of young men who had not been securely launched into life before leaving for the war. Now over four years older, and thrust on a deflated post-war labour market badly conditioned to receive us, we were ill-equipped for life. The war industries and markets had closed down and readjustment had to take place.' Some returned to Australia, others remained in England, exploring further opportunities.

The Commonwealth Government launched a Peace Loans scheme to recover war costs and fund soldier resettlement. One of the Peace Loan campaigns involved returned military pilots flying aircraft to numerous metropolitan and regional locations where they performed aerial acrobatics in order to

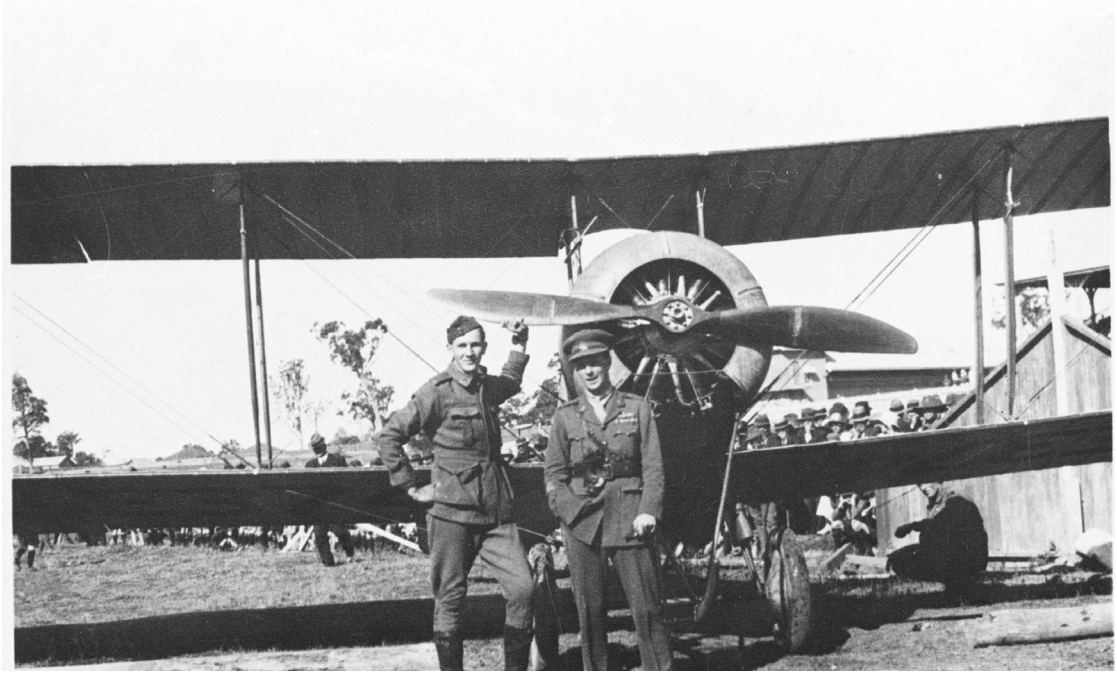

FIG. 12. Errol Campbell and Francis Ryan Smith with their Avro 504 aircraft at Kedron Park Racecourse, September 1919. Thomas Macleod Queensland Aviation Collection, Queensland Museum.

raise support from businesses and the public. As stated by Wixted (1989, p. 2), 'a Peace Loan team was allocated to Queensland in September 1919'. Pilot Captain Frank Smith and air mechanic Errol Campbell, both returned Queensland servicemen, began with a flight from Lytton airfield to Kedron Park Racecourse (figure 12). During the following days they flew to Ipswich, Toowoomba, Warwick, Stanthorpe, Boonah and Beaudesert (Wixted 1989, p. 3). Smith and Campbell became founding members of the Queensland Aero Club.

In Brisbane, Howard Fletcher put out a call to his fellow aviators: 'The flying men of Queensland, scattered as they are throughout the country, need some central body to which they can look for information in connection with aviation' (*The Brisbane Courier* 1919, p. 6). A dinner was organised at the Brisbane Club on 5 November 1919, with all officers of the A.F.C. and R.A.F. invited to attend. Writing just before the event, Macleod states:

> Mr J. J. Knight, who has for years taken a very keen interest in flying and gave material assistance in regard to the work of the Q.V.F.C., has himself made a number of passenger flights, and he as provisional chairman and Captain H.E. Rydon of Sandgate as Hon. Secretary-Treasurer, are undertaking all arrangements for the coming meeting and dinner. (Macleod 1919, p. 3)

The event was established as the inaugural dinner of the Australian Aero Club, Queensland Section. Its purposes were stated as: '(i) The formation of a club to which those interested in flying could look for authoritative advice, (ii) The binding together in


AUSTRALIAN AERO CLUB

(QUEENSLAND SECTION)

—

DINNER

TO CONGRATULATE

SIR ROSS SMITH, K.B.E., M.C.,

D.F.C., A.F.C., Australian Flying Corps

AND

SIR KEITH SMITH, K.B.E.,

Royal Air Force

ON

THEIR HISTORIC FLIGHT FROM ENGLAND TO AUSTRALIA ON THEIR "VICKERS VIMY."

—

HOTEL BELLE VUE

12-1-20

EXCHANGE PRINTING CO. LTD., BRISBANE

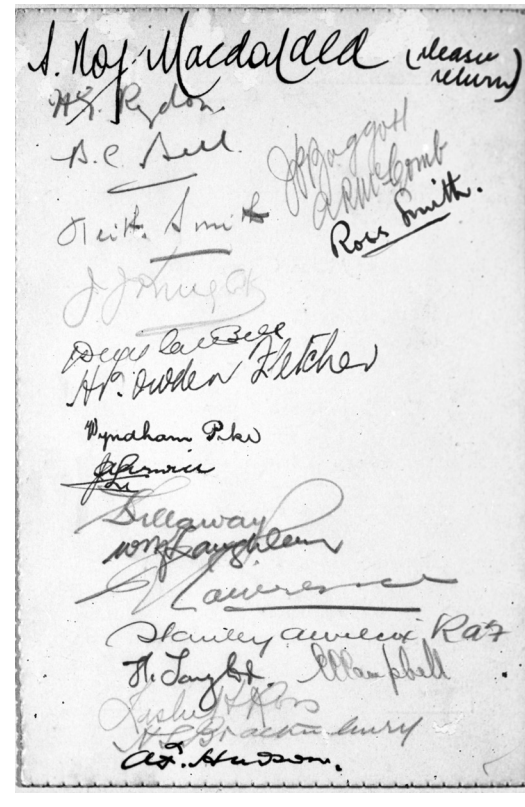

FIG. 13. Menu, dinner to congratulate Sir Ross Smith, K.B.E. M.C., and Sir Keith Smith, K.B.E., on their historic flight from England to Australia', hosted by the Australian Aero Club (Queensland Section), signed by members, 12 January 1920. Thomas Macleod Queensland Aviation Collection, Queensland Museum.

fellowship of men who had formed ties of friendship with other members of the air services, (iii) The holding in connection with of an annual reunion' ('Brisbane Branch Formed', *The Daily Mail*, 1919, p. 2). John James Knight was elected chairman, and committee members, Thomas Macleod, Francis Ryan Smith, A.R. Macdonald, C.T. Williams, A.N. Hudson and W. Pike appointed, with H.E. Rydon in the office of secretary. At the dinner, Macleod gave a toast to 'The Air Forces' and the Queensland Aero Club, tracing the aviation movement in Queensland and 'spoke pointedly of the future of the science here, and the part which the club must of necessity play in the development of flying, commercial and otherwise' (Queenslander, 1919:14).

Signatures on the back of a menu (figure 13) from the inaugural dinner provide an overview of some of the connections that the Queensland Aero Club offered these aviators. Elected chairman John James Knight, editor in chief and then managing director of the Brisbane Newspaper Co., accompanied Frank Smith on one of his Peace Loan flights. Knight was a visible supporter of aviation, and amongst his many contributions 'was discussing aeroplanes for medical transport with Rev. John Flynn' (Summers, 1983). Arthur Rowland McComb, who served with the A.I.F. and ended the war as a flight instructor, resumed his work as a surveyor after the war, surveying landing grounds between Melbourne and Charleville for the 1919 Air Race from England to Australia. He later worked as Superintendent of Aerodromes in New South Wales, acting Commonwealth Controller of Civil Aviation and Controller of Ground Organisation.

Further signatures on the menu include Wyndham Pike who, after his service in the A.I.F. and the R.A.F., returned to his family's clothing business, Pike Brothers Ltd (Australian History Publishing Co, 1936:231). Pike owned several aircraft as part of a short-lived business, Light Aeroplanes Pty Ltd, and was appointed Commander of the Queensland Wing of the Air Training Corps. Howard Fletcher, who had served with Fysh and McGinness, was one of the founders of the Narromine Aero Club in 1920, and Sir Donald Cameron was Member for Brisbane, represented Australia at the League of

FIG. 14. (left to right) Walter Pike, founder and patron of the Stanthorpe Aero Club (father of Wyndham Pike), J.H.F. Moran (Moxon Motors), Harold Jones and Ron Adair, with DH.60 Moth owned by the Queensland Aero Club, after competing in the first Stanthorpe Aerial Pageant on 30 March 1930. Thomas Macleod Queensland Aviation Collection, Queensland Museum

Nations Assembly, and was a leading spokesman for the Returned Sailors' and Soldiers' Imperial League of Australia (Wigzell, 1979). These men, amongst many other Aero Club members, would support developments in commercial aviation across Australia in the following decades (figure 14).

THE 1919 AIR RACE

Following the end of the First World War, Prime Minister William 'Billy' Hughes declared his enthusiasm for the possibilities of aviation in Australia, and the Commonwealth Government announced a competition with a prize of £10 000 to 'the first successful flight to Australia from Great Britain, in a machine manned by Australians.' Hundreds of airmen in Britain waiting to return to Australia looked at the opportunity with great excitement, but most failed to attract sponsors or find a suitable aircraft, and many applications to compete were rejected on the basis of lack of experience.

In his 1919 article, Macleod wrote that members of the Aerial League in Brisbane, Hinkler and Rendle, had entered the race and 'I sincerely hope that they will both accomplish the journey safely and that one of them will secure the prize' (Macleod, 1919:3). Hinkler's application to fly solo in a Sopwith Dove was rejected, and he stayed on to undertake further training and pursue

other opportunities. Kingsford Smith applied for the race in partnership with Valentine Rundle and Cyril Maddock, but was rejected on the basis of a lack of navigational experience.[7] According to Fysh, he and McGinness, with Baird as their mechanic, sought entry to the race after returning to Australia, but their sponsor Samuel McCaughey died and they were forced to withdraw their entry.

Fysh and McGinness were instead commissioned by the Defence Department to survey suitable landing sites for the air race participants through the Northern Territory and Queensland, from Longreach to Darwin and into the Gulf of Carpentaria. With driver George Gorham, they left Longreach on 18 August 1919 and reached Darwin on 8 October, having travelled with difficulty across areas that had not yet seen motor vehicles let alone aircraft. Fysh recalled the public response to their A.F.C. uniforms on their arrival in Longreach: 'I can best describe the experience by comparing it to what would happen if two of our present-day spacemen walked along the street in full space rig-out' (1965:69). Plans for an aviation company were developed by Fysh and McGinness during their travels, with some of the aerodromes surveyed and made during their work for the 1919 Air Race used during the first flights of Qantas years later.

The five crews who participated in the 1919 Air Race were the first to attempt to fly from England to Australia. They flew with few and often inaccurate maps, and little in the way of navigation or communication aids. The first crew to start in the race were George Matthews and Tom Kay, in a Sopwith Wallaby aircraft, departing England on 21 October 1919. After experiencing engine troubles and flying through bad weather, they took six months to reach Bali, Indonesia, where they had to abandon their aircraft after a crash in a banana plantation (Gunn, 1988:19).

The second crew to fly was led by brothers Ross Smith and Keith Smith, with mechanics Wally Shiers and Jim Bennett in a Vickers Vimy (figure 15), registration G-EAOU, known as 'God 'Elp All Of Us'. Ross and Keith Smith had entered aviation during the First World War, Ross with the A.F.C. and Keith with the R.F.C. in 1917. Keith did not see active service, but was posted to several squadrons as an instructor. Ross served as a pilot with No.1 Squadron, flying with Fysh and McGinness, carrying out reconnaissance work and attacks on Turkish ground forces, and was highly decorated for his gallantry and devotion to duty.

On 12 November 1919, the Vickers Vimy and crew took off from Hounslow, having arranged with the Shell Company to have fuel available en route, and carrying spare parts for repairs during their flight. They experienced hazardous flying conditions, travelling through France, Italy, Crete, Egypt, Syria, Iraq, Pakistan, India, Myanmar, Thailand, Malaysia and Indonesia. They completed the 17 910 kilometre journey in 28 days, arriving in Darwin on 10 December, and winning the competition. The Smith brothers were both given knighthoods and travelled to a number of Australian cities on aviation lecture tours.

In fact, their journey from Darwin to Melbourne took twice as long as their flight to Australia. After being forced down at Cobbs Creek in the Northern Territory with a split propeller, the crew made their way as far as Charleville, Queensland, before being forced to land again when their port engine exploded. The Vimy was grounded for six weeks while the engine was repaired and a new propeller manufactured at Queensland Railway's Ipswich workshops (figure 16). The Australian Aero Club (Queensland Section) held a dinner for Ross Smith and Keith Smith in Brisbane, while they were awaiting completion of the repair work.

FIG. 15. Vickers Vimy G-EAOU, c. 1919. Thomas Macleod Queensland Aviation Collection, Queensland Museum.

The other three race entries failed to complete the journey. Lieutenants James Ross and Roger Douglas, flying an Alliance Seabird, crashed within minutes of take-off on 13 November. Both aviators were killed. Hubert Wilkins, captaining the Blackburn Kangaroo which Kingsford Smith was to fly, took off with crew members Valdemar Rendle, D.R. Williams and Garnsey Potts on 21 November. On 8 December, Rendle wrote in his logbook 'Main oil return pipe on port engine broke 40 miles from south west point of Crete.' The crew had a difficult landing in Crete, and although there was no damage to the aircraft, Rendle recorded that the port engine would require a complete rebuild, and concluded 'So ended the attempt to fly to Australia' (Rendle 1919, p. 5).

The last 1919 Air Race crew, Cedric Howell and George Fraser in a Martinsyde Type A Mark 1, left on 4 December. They crashed near Corfu and were both drowned (Gunn 1988, p. 19). A later attempt was made by Ray Parer and John McIntosh flying an Airco DH9. They departed London on 8 January 1920, when the race had already been won. Although the journey took 206 days to complete, they were the second crew to fly from England to Australia and the first to do so in a single engine aircraft.

BEYOND THE WAR

Writing after his service with the R.F.C., Macleod was confident that 'Flying is now a practical proposition and it is high time the Queensland public awoke to the fact' (Macleod 1919, p. 3). In his summary of Queensland aviation from 1910 to 1919, Macleod had alluded to many more partnerships and enterprises than those mentioned, those that had played out before, during and after the war amongst Queensland aviators and their fellow aviators across Australia and the world. It was clear that where military aviation had provided a launching ground for training and technological developments, many First World War aviators would in fact make their lasting contributions in commercial aviation.

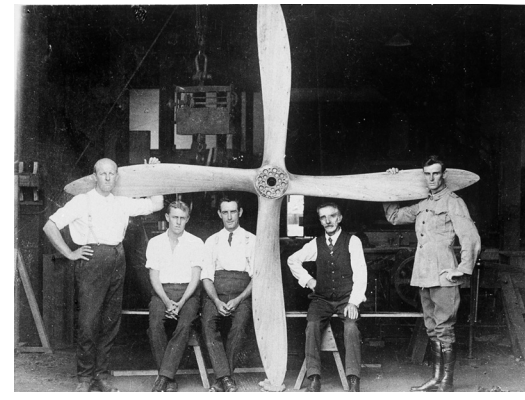

FIG. 16. Replacement propeller manufactured in the Ipswich Railway Workshops Pattern Shop – (l-r) G. Page, C. Boyd, F. Hazlewood, J. Millar and J. Bennett, January 1920. Queensland Museum Collection.

As returned servicemen began fledgling commercial enterprises in aviation, including joyflights, barnstorming, aerial surveying and mail delivery, government regulators attempted to get up to speed. The government sought to regulate Australian aviation through the 1920 *Air Navigation Act*, with the first work of Lieutenant-Colonel Horace Brinsmead, as Controller of Civil Aviation, being the designation of airfields in major city areas as official landing grounds and to standardise the aircraft registration system. The Act also allowed for tenders to be called for the carriage of airmail under government subsidy, pending funding, with four initial routes identified that would complement and connect existing rail services: Geraldton to Derby in Western Australia, Adelaide to Sydney, Sydney to Brisbane, and Charleville to Cloncurry in western Queensland.

Following the introduction of the 1920 Act, the Aero Club received a license to carry passengers and carry out aviation work. In 1928, the Aero Club was using a hangar at Eagle Farm Aerodrome, moving its operations to Archerfield Airfield in 1931. That same year, the Aero Club began flight training under contract with Qantas, with Qantas' Chief Flying Instructor Captain Lester Brain also a member of the Aero Club. In 1935 the Royal Charter was granted to the Aero Club.[8]

Thomas Macleod continued to be an advocate for aviation after the war, and in 1922 was appointed a commissioner of the World's Board of Aeronautical Commissions. Forced to abandon his legal practice due to a war-inflicted disability, Macleod took up a grazing property near Longreach, which he renamed Wingalong (Gill 1986). Macleod was a director of Qantas from 1925 to 1929 where he was instrumental in establishing the company's involvement in the flying doctor service (Gill 1986). After marrying Lady Aurea Frederswyde Wace, Macleod settled in England, where he bred sheep and during the Second World War trained Local Defence Volunteers in the Home Guard. Macleod died at in Cornwall in 1963. He is remembered in Queensland with a street and parked named after him in the Brisbane suburb of Sinnamon Park, commemorating Macleod's glider flights of 1910.

The determination of those involved in aviation during the First World War to see it become a viable commercial enterprise after the war was a new kind of battle – in competition, consumer confidence, supply and demand. The partnerships established through early aerial experimentation and dogfights over the front laid the foundations for later political and economic gains. However, where dozens of aviation business began during the 1920s and early 1930s, only a few would survive into the 1940s. The opportunities and challenges faced by early commercial aviation in Queensland are best summarised in Macleod's closing remarks:

> When one considers how safe flying has now become and to what state of perfection the machines have come, however, one should bear in mind the great difficulties which had to be overcome in order to bring the science of flying to its present state, and one will then realise, even if only in a small degree, all that is conveyed by the adoption by the Royal Flying Corps for a motto such as theirs, "Per Ardus ad Astra" – Through difficulties to the stars. (1919, p. 3)

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❑ ENDNOTES

1. Further detail of the competition and its conditions in Craddock, David A. 1999. *Feeling the Air: the famous names and colourful personalities, who pioneered Australia's first flights*. (D.A. Craddock: Epping, N.S.W.); conditions and extension of entry date in Commonwealth of Australia Gazette, no. 22, 9 April 1910.
2. Other reports suggest that the aircraft was actually refurbished from the remains of a Caudron owned and crashed by A.W. Jones.
3. Numerous books and articles have been written about the life and flying career of Sir Charles Kingsford Smith, but the details of those events lie outside of the scope of this paper. For further reference, Kingsford-Smith, Charles. 1937. *My Flying Life: an authentic biography prepared under the personal supervision of and from the diaries and papers of the late Sir Charles Kingsford-Smith*. Andrew Melrose: London; Howard, Frederick. 1962. Charles Kingsford Smith. Oxford University Press: Melbourne; Wixted, E.P. 1975. Sir Charles Kingsford Smith. Queensland Museum: Brisbane.
4. Details and further history of Qantas can be reviewed in numerous sources, see Gunn, John. 1988. *The defeat of distance, Qantas 1919–1939*. (University of Queensland Press, St. Lucia, Qld).
5. The Royal Flying Doctor Service was in part a product of the development of aviation during the war, and was also supported by members of the Queensland Aero Club. "In 1917, Flynn received an inspirational letter from Lieutenant Clifford Peel, a Victorian medical student with an interest in aviation. The young airman and war hero suggested the use of aviation to bring medical help to the Outback. Shot down in France, he died at just 24 years of age and never knew that his letter became a blueprint for the creation of the Flying Doctor Service." https://www.flyingdoctor.org.au/about-the-rfds/history/john-flynn-bio/
6. Further information about the career of Sir Lawrence James Wackett in Wackett, Lawrence James, Sir. 1972. Aircraft Pioneer: an autobiography. Angus and Robertson: Sydney.
7. Peter Maiden states that the withdrawal of support for Kingsford Smith's application was also based on their lodging doubtful insurance claims on crashed aircraft in England (Maiden, 2009:72).
8. The details in this summary as included at http://www.rqac.com.au/history/. In March 2016, the Royal Queensland Aero Club ceased operating and entered Voluntary Administration.