

## **The CENTENARY of POWERED FLIGHT in AUSTRALIA.**

During 2003, The Royal Aeronautical Society - Australian Division, and its Branches, celebrated the centenary of powered flight. The focal point of these celebrations was the Centenary of Flight Dinner, held on December 17, at The Powerhouse Museum in Sydney, to coincide with the centenary of the Wright Brothers momentous achievement at Kitty Hawk.

Since 2003, there have been ongoing celebrations as individual nations have reflected on their own contributions to a technology that has so profoundly reshaped our world. In Brazil and France, during 2006, it was Santos Dumont Year. Last year, 100 Years of British Aviation was celebrated in the United Kingdom, with particular focus on the first powered flight there by Samuel Cody. This year, 100 Years of Flying in Canada is being celebrated, with a special tribute to the first powered flight by Douglas McCurdy. From December this year, it will be the turn of Australia to acknowledge how fundamentally a century of powered flight has changed this country. It will also provide an opportunity to honour those individual Australians who played such a major role on aviation's world stage, both in peace and in war, during the last 100 years.

In 1897, Lawrence Hargrave was made a Life Member of the Aeronautical Society of Great Britain, now the RAeS, to acknowledge his pioneering contribution to the science of aviation. The RAeS in Australia has a special attachment to Lawrence Hargrave through the Lawrence Hargrave Lecture, the Lawrence Hargrave Award, and as conservator of his grave at the Waverley Cemetery, Sydney. Therefore, it is appropriate to remember that Hargrave chaired the inaugural meeting of The Aerial League of Australia in Sydney on April 28, 1909. This date marks the commencement of activities of the first organised pressure group, eventually with branches in other states, set up to promote the benefits of powered flight to the Australian people and their new Federal Government. The organising force behind the League was George Augustine Taylor.

The first significant achievement of the Aerial League was in June, when Taylor gained a commitment from the Minister for Defence, Joseph Cook, for the Federal Government to offer a prize to the successful inventor of a powered aeroplane for military purposes.

During September 1909, Taylor established the first aeroplane factory in Australia at Surry Hills, Sydney. There he built a powered monoplane, as well as a biplane glider. The glider was intended as a training device before going on to attempt powered flight in his monoplane. Although his monoplane was a failure, Taylor achieved the first untethered flight in Australia, in his glider, at Narrabeen Heads on Sunday December 5, 1909, before a crowd of about 100 people.

With financial support from Lawrence Adamson, and promoted by J. & N. Tait, the first powered aeroplane to be imported into Australia arrived in Sydney from France, onboard RMS Otranto, on November 15. It was a Wright Model A, and in this aircraft **Colin Defries made the first powered flight in Australia, at Victoria Park Racecourse, on Thursday December 9, 1909.** It was a short, straight line flight and was controlled throughout. Defries had received pilot training at Cannes early in 1909, and again at Paris when he returned there later in the year. The flight was witnessed by a crowd of between about 150 and 250 people, including reporters from the Sydney newspapers. The following extracts from The Sydney Morning Herald, and The Daily Telegraph, published on December 10, convey the sense of excitement experienced by the onlookers as they witnessed the miracle of flight for the first time.

**The Sydney Morning Herald:** "Certainly no better day could have been chosen. When the first test was made the breeze, which was a south-easterly, was scarcely felt. The aviator faced the wind, and made several trials unsuccessfully. Then he turned to the north, intending to run into the wind at the turn. The result was a success. When travelling at about 35 miles an hour, and handling the machine alone, Mr Defries suddenly raised his elevating planes, and at once rose into the air. As he left the ground there was an involuntary cry from about 150 spectators, "He's up!" and he was up. As the machine rushed

forward it kept in the air, and rose quickly from 2 ft to fully 15 ft or 20 ft, and then tapered down again to earth, after covering about 115 yards.”

**The Daily Telegraph:** “The Wright aeroplane accomplished its first flight yesterday afternoon at Victoria Park Racecourse. After several preliminary tests it succeeded in flying 115 yds, the height from the ground varying from about 3 ft to 15 ft. It was admitted on all sides that the machine in rising behaved like a bird. It flew perfectly horizontal and showed no tendency to dip at either wing. When the aeroplane rose there was an involuntary shout of delight from the 250 spectators present. “He’s flying”, was the universal cry, and there was cheering all along the ground. The manner in which the aeroplane flew was a revelation and led one to believe that had Mr Defries tried to continue longer he could have done so.”

Colin Defries made a second flight on December 18. The Sydney Morning Herald reported: “The Wright aeroplane made its first important flight on Saturday at Victoria Park racecourse, covering a quarter of a mile in a straight line at a height varying from 2 ft to 15 ft.” The length and end result of this flight, (it ended in a crash), was almost identical to that of Samuel Cody on October 16, 1908. However, for the Australian aviation enthusiast of 1909 the flights by Defries were disappointing because they had not demonstrated the progress of powered aviation since 1903. For example, Orville Wright had just set a new altitude record of 1600 ft, in a similar Wright Model A, at Potsdam Germany, on October 2, 1909.

It was left to **Harry Houdini** to demonstrate to Australians the practical possibilities of the aeroplane by **performing the first controlled, circling flight in Australia on March 18, 1910**. Houdini received pilot training on his Voisin biplane at Hamburg, Germany, during November 1909. At about this time he accepted an invitation from the Sydney theatrical identity, Harry Rickards, to perform at his Tivoli circuit theatres in Melbourne and Sydney. Houdini decided to ship his Voisin to Australia, and use it to promote his performances. He **made his first flight in the Voisin at Diggers Rest, Victoria, on March 18, 1910**. It was a short flight of about one minute, at little more than tree top height, but it was a controlled circuit of Plumpton’s paddock. The first, and two subsequent flights that day, were witnessed by at least nine people who signed a witness statement. Reporters from The Argus and The Age were also present. The following extract is from The Age, March 19, 1910.

**The Age:** “In his first attempt Houdini sent his machine tearing across the paddock at a tremendous speed, the biplane rising in less than a hundred yards. Just as it rose the machine swerved straight for a solid gum tree, and the hearts of the onlookers beat fast as they saw disaster - perhaps death - right in the track. Mechanically the aviator moved the elevating lever, and the biplane skimmed over the tree like a bird. A complete circle of the paddock was made at about 50 miles an hour, and the descent was accomplished with perfect ease and gracefulness. To land, Houdini flew low, stopped the engine, and sailed easily and gently to earth on the momentum of the machine.”

Houdini flew again at Diggers Rest on March 20 & 21. During Houdini’s time at Diggers Rest, his flights increased in altitude to above 100 ft, and in duration to a maximum of 7 min 37 sec. He then moved to Sydney where he again demonstrated his Voisin to the public at Rosehill Racecourse, between April 18 and May 1. His last flight in Australia attracted a crowd of about 500 people. Satisfied that Houdini had adequately demonstrated the capabilities of his Voisin, The Aerial League of Australia, awarded him a shield which was inscribed: “To Houdini for the First Aerial Flight in Australia, 16 March 1910.” It is thought by some that the date on the shield was fudged to counter a claim from Fred Jones that a young pilot named Fred Custance had carried out the first controlled, circling flight in Australia, at Bolivar, near Adelaide, on March 17, 1910.

Fred Jones, an Adelaide businessman and entrepreneur, purchased a **Bleriot XI** during a visit to Europe in the latter half of 1909. The aircraft arrived at Port Adelaide on February 3, 1910. For three weeks, from February 14, it was placed on public exhibition at John Martin’s Rundle Street store in Adelaide. The Bleriot was then removed to Mr Winzor’s property at Bolivar to prepare it for flight testing. Fred Jones had two assistants, Bill Wittber, an experienced automobile engineer and aviation experimenter,

and Fred Custance, a nineteen year old automobile mechanic. Although he had no pilot training, Custance volunteered to be the first to fly the Bleriot. By 11 am on Sunday March 13, the Bleriot was ready for its first taxiing trials. A substantial crowd had gathered including reporters from the Adelaide papers. Fred Custance was the first to taxi around the paddock at about half speed. Bill Wittber then climbed onboard, and the resulting 'Wittber's Hop', during which he later claimed to have flown for 40 yds at a height of 5 ft, was described on the following day in The Register, by its 'Special Reporter'.

**The Register:** "A similar run was taken by Mr C. W. Wittber, and on the return trip before the wind the machine did an unexpected flutter. A strong puff caught one of the planes and caused the machine to rise a few feet clear of the ground, but as she was heading for a rather nasty spot power had to be shut off, and she came to a standstill. The engine was subjected to further satisfactory tests with the machine anchored, after which the trials were abandoned for the day on account of the freshening breeze."

There were no further trials with the Bleriot until the early morning of March 17. Bill Wittber was not present, leaving the inexperienced Fred Custance in the pilot's seat and the equally inexperienced Fred Jones to swing the propeller. There was no ground crew to help anchor the Bleriot during preliminary engine checks. The only other people present were the property owner Mr Winzor, and two neighbours, Mr & Mrs Sawyer, no doubt driven from their bed by the early morning activity.

The Adelaide newspapers were forced to rely on interviews with Fred Jones to report what happened that morning. He told reporters that two flights had taken place. As we now know, through a confession by Fred Jones, made a few months before his death, **the first of these flights was a fiction.** A description of this mythical flight follows, as it appeared in The Register on March 18.

**The Register:** "...at about 5 o'clock Mr F. C. Custance took his place in the pilot seat. A few preliminary twists of the propeller, and the machine was under way at good speed. It rose quickly, and, with the fences of the paddock as a guide, the area was covered thrice in rapid succession - a distance of about three miles. The height of flying was between 12 and 15 ft. The machine was in the air for about 5m 25s... the pilot landed without any trouble."

Sunrise on March 17, 1910, as reported in The Register was at 6.19 am Adelaide time, with the moon setting at 10.32 pm. In retrospect it is obvious that a successful flight in a Bleriot XI, in the pre dawn darkness around 5 am, involving three circuits of a paddock at a height of between 12 and 15 ft, would be impossible by someone with no flying experience. Thus, with the first flight exposed by Fred Jones himself as a myth, we are left with the remaining details he gave to the papers regarding the only flight of the Bleriot that morning. A description of this flight follows, as reported in The Register on March 18.

The Register: "After waiting for daylight, Mr Custance again entered the machine with the intention of establishing a height record. The machine started off in wonderful fashion from a 40 yds run, and quickly mounted to a height of about 50 ft which is the greatest elevation yet attained by a monoplane in Australasia. After traveling for about 200 yds Mr Custance made a slight error in manipulating the elevators, and caused the machine to descend head foremost. The undercarriage was smashed and the propeller broken,..."

The general consensus has been that the foregoing, despite the source being Fred Jones, is a credible account of the one and only flight by Fred Custance at Bolivar. There was also the evidence of a damaged Bleriot, and a slightly injured Fred Custance, for all to see after the event. Many years later, Bill Wittber was consulted about the wording on the monument at Bolivar that he unveiled on June 27, 1967. These words describe only one flight by Custance, which ended in a crash.

**Therefore, it is beyond doubt that it was Harry Houdini, and not Fred Custance, who achieved the first controlled, circling flight in Australia.**

In view of the foregoing, it is possible to **summarise the key dates for first flights in Australia** as follows:-

- **December 5, 1909.** The **first untethered flight in a glider by George Augustine Taylor** on a Voisin type, biplane glider, at Narrabeen Heads, NSW.
- **December 9, 1909.** The **first powered, straight line flight by Colin Defries** on a Wright Model A, at Victoria Park Racecourse, Sydney, NSW.
- **March 18, 1910.** The **first powered, circling flight by Harry Houdini** on a Voisin Biplane at Diggers Rest, Vic.

Starting well before the importation of powered aircraft into Australia, and in no need of motivation by the Aerial League, an uniquely Australian approach to the challenge of powered flight was taken up by two brothers, **John and Reginald Duigan**, on their parent's property, 'Spring Plains', at Mia Mia, Victoria. John Duigan traveled to London in 1902 to study engineering. He graduated in electrical engineering from Finsbury Technical College in 1904, and in motor engineering from the Battersea Polytechnic College in 1905. After his return to Australia he was inspired by reports of Wilbur Wright's flying demonstrations in France during August & September 1908. By the end of 1908 John had joined his brother Reginald at 'Spring Plains', and the building of his first glider had commenced. The dedicated work of the Duigan Brothers eventually resulted in some significant firsts for powered flight in Australia. Most importantly, John Duigan became the first Australian to design, build and successfully fly a powered aircraft in Australia. He designed a biplane, based on the Farman type, and powered it with a 25 hp engine, which was in turn specially designed and built in Melbourne by J. E. Tilley. The **first trials of the biplane were carried out at Mia Mia on July 16, 1910**, achieving a few short hops. John Duigan's **first controlled flight was performed on October 7, 1910**, over a distance of 196 yds at a height of about 12 ft.

The celebration of a century of powered flight by Australians will no doubt embrace the achievement of the Duigan Brothers. John Duigan had the courage to test fly the aircraft he had designed and built himself. It was not a proven aircraft like the imported Wright, Voisin and Bleriot models. Furthermore, while Defries, Houdini and Custance never flew an aircraft again, after their Australian experiences, John Duigan went on to contribute to the development of powered flight, particularly through his association with A. V. Roe & Co. He later served with distinction as a pilot with the Australian Flying Corps during WWI.

Just as the 1903 Wright Flyer is preserved as a National Treasure, in The Smithsonian in Washington DC, so too in Australia the 1910 Duigan Biplane is preserved in the Museum of Victoria. The significance of this rare aviation icon will resonate with members of the RAeS - Australian Division as they reflect on the achievement of the Duigan Brothers, and of all involved with Australian aviation over the past century.