Welcome to the August issue of our newsletter, The Good Oil.

**Happy Birthday** to our August born members. We hope you all have a beaut birthday and many happy returns.

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**Australian Aviation Pioneers**
Thanks very much to Frank for giving me information about the Duigan brothers. I found it very interesting and I hope you do as well.

**John Robertson Duigan 1882-1951, Reginald Charles Duigan 1889-1966**
On July 16, 1910, John Robertson Duigan flew an aircraft (a seven metre hop), at his family's property 'Spring Plains' at Mia Mia, near Kyneton, Victoria, Australia. This is acknowledged as the first powered, controlled flight of an all Australian designed and built aeroplane and occurred less than seven years after the Wright Brothers' 'Flyer' lifted off at Kittyhawk, North Carolina. In the five countries where powered flights were achieved, considerable technical resources were available making Duigan's effort all the more remarkable because he accomplished the flight with little outside help other than several texts, the magazine Aero and the engineering skills of his younger brother Reginald Charles.

**John Robertson Duigan**
Born on May 31, 1882 at Terang, Victoria, John Duigan studied electrical and motor engineering at Finsbury College in London. He returned to live at Spring Plains, where he, in 1908 with his younger brother Reginald, commenced experiments in aviation. After the first successful aeroplane of 1909/10 (and a lesser known second machine constructed in 1912 with AV Roe in England), John now back in Australia and again with the help of his brother Reginald, constructed a third aircraft at their parents' home in Ivanhoe, Victoria. The aircraft, a two seat tractor biplane based on the AVRO ENV crashed on its maiden flight at Keilor Plains in February 1913. In the crash John was badly bruised and the brothers did not rebuild the aircraft. John Duigan was awarded the Military Cross for gallantry in action during WW1. He later opened his own motor engineering business in Yarrawonga. He served in the Quality Control Branch of the Royal Australian Air Force in WW2. Duigan retired to Melbourne, where he died in 1951. A memorial to the first flight was unveiled in 1960, about six kilometres from Mia Mia on the Mia Mia-Lancefield Rd.

**Reginald Charles Duigan**
Reginald Charles Duigan was born in Melbourne on 15 September 1888. During his childhood, the family lived in Brighton and Elsternwick and Reginald began attending classes at Brighton Grammar School in 1900 where he excelled at sporting and academic pursuits winning prizes in both fields. He also spent a year at school in Switzerland, while his parents were travelling in Europe and became fluent in French, retaining the language well into old age. Despite a strong mechanical aptitude and inventive mind, Reginald did not pursue formal technical education unlike his brother John. Instead Reginald elected to assist his father in running the family's pastoral properties. By 1908 Reginald was managing 'Spring Plains', a 10,000-acre sheep station at Mia Mia in central Victoria owned by his father. After his brother returned from England, he joined Reginald at Spring Plains and shortly afterwards began building a Wright-type glider and later a powered Farman-type biplane after hearing of Wilbur Wright's 1908 flights in France. Reginald assisted John in constructing the biplane which was assembled in a specially-built shed on the top of a rise near the homestead. Although an engine, propeller and parts for the undercarriage where obtained from engineering firms in Melbourne, all other components required were made on the farm. Reginald was entrusted with a great deal of the repetition work, fabricating numerous metal fittings and aerofoil ribs from red pine for the wings. He was always on hand to assist John with every test flight made in the plane and to record events with his camera. Both brothers enjoyed riding and tinkering with motorcycles and driving their father's Leader car and motor buggies at Spring Plains. Reg invented an ingenious self-opening counter-balanced front gate for the property that could be activated by a driver without getting out of the motor
car. On 16 July 1910 the Duigan biplane achieved a short flight from the creek flat at Spring Plains with John at the controls, the first by an Australia-built aeroplane. With assistance from Reg, John continued to improve and modify the machine until he managed to fly for 196 yards (180 metres) on 7 October 1910 - an event that John regarded as the first true controlled flight. Reg later described the biplane as John's "pidgeon and he gave it everything". Reg also successfully completed about 12 flights in the biplane himself, before it was retired to the shed in mid-1911 never to fly again. It was donated to the Melbourne Museum by John in 1920. John returned to Britain in late 1911 to obtain his aviator's certificate and Reg followed him there in 1912 with the same intention, but by the time he arrived John had sold the Avro biplane he had purchased from A.V. Roe. Reg flew a seaplane from Lake Windemere as consolation. The brothers decided to purchase parts from A.V.Roe and kept the ENV engine from John's British-built machine to build a new biplane in Melbourne. Work began at their parent's house in Ivanhoe, soon after their return in late 1912 and was finished by early February 1913. The biplane crashed during its first test flights at Keilor on 17 February 1913 injuring John. Reg returned to live at Spring Plains and in May 1914 married Phyllis Mary Peck, the granddaughter of John Murray Peck who, together with Freeman Cobb, John Lamber and James Swanton as four young American immigrants, had founded famous Cobb & Co coaching firm in Victoria in 1854. The couple had four children, Brian, Terence, Suzanne, and John, who would all later pursue interests in aviation. Reg continued to invent and patented the 'Lock-Grip' wire strainer in 1916, which was put into production in England. After the sale of Spring Plains in 1921, the family moved to 'Cooraminta', a property near Colac, where Reg patented a plug petrol pourer, a device for opening split rim wheels in 1926 and a new type of box spanner in 1931. After moving to Geelong in 1944, Reg continued to experiment at his home in Newtown. Reg Duigan died at Geelong on 15 June 1966.

**Designing and Building the Duigan Aircraft**

Duigan based his aircraft design on the French 'Farman' biplane, which had flown a kilometre in 1908. Duigan prepared his own plans and specifications and in a large shed on the family property, constructed the frame of the plane from red pine and mountain ash. Duigan also made the wheels, propeller shaft, and the ball bearing races. He later cast his own water-pump and made his own radiator. The J.E. Tilley Engineering Company of Melbourne supplied a twenty horsepower, four cylinder engine, and Mr. J. Fulton of Melbourne made the two metre by 15 centimetre propeller. To fly the aircraft, it had to be moved from its shed, down a steep hill and across two creeks, over which special bridges were built. The dimensions of the take-off field were 1183 metres x 91 metres, which allowed for relatively straight flights only, and limited them to less than 800 metres. Three persons were required to move the aircraft back up the hill to the shed.

**The First Long Flight**

After a successful flying 'hop' on July 16, 1910, Duigan applied to the Defence Department for details of the Commonwealth Prize of 5000 Pounds then being offered to the builder of a suitable military aircraft. He made further improvements to the plane by rebuilding the engine for increased power and providing greater balance to the wing design. On October 7, 1910, Duigan made his first sustained flight of 178 metres at a height of about three metres, before half a dozen spectators. Duigan described this achievement as his first successful flight under full control. Duigan's application for the Commonwealth prize was rejected because he missed the close of entries in March 1910. However, the Defence Department requested a demonstration of the machine in May 1911. Along with his brother Reginald, John Duigan continued to fly the aircraft locally, reaching distances of two kilometres and altitudes of between two and 18 metres. The plane completed sixty flights before being placed in a hangar where it remained through the years of World War I.

**Duigan Aircraft Specifications**

- Overall Wing Span: 10.5 m
- Engine: Tilley 4-cylinder air, water cooled, 18.6 kW (25 hp) at 1800 rpm
- Fuel tank capacity: 4.55 L
- Max speed: 64 km/h. Take off run approximately 91m in 6 km/h wind.

**Though For The Day**

A recent study has found that women who carry a little extra weight live longer than men who mention it.

R.I.P. Phyllis Densley
We hold Phyllis and Albert and their families in the highest regard.

Rally Reports
Wentworth Junction Rally
Thanks Marie B for the report on the Wentworth Junction Rally.

Marie and Lloyd were the only club members of ours to attend the Wentworth Junction rally, up there near Mildura, where the Darling River meets the Murray River.

I thank Marie and Lloyd for supporting other club’s rallies as we appreciate members from other clubs attending our rally.

It is always good to see our banner at as many rallies as possible.

The engine compound that they were in was right on the bank of the Murray River. It was a terrific spot to sit and watch the paddle steamers and small boats coming and going all day.

The rally had about 30 Ronaldson & Tippett engines, which were the feature engine. They also had a mixture of other engines, trucks, cars, tractors and bikes. Unfortunately there was a mishap when an engine’s water hose came off, but fortunately no-one was hurt. Marie and Lloyd had a great weekend at the rally and look forward to returning again next year.

Our Family Fun Day
On Saturday 5th August we had a great family fun day at the showgrounds.

This was a day to get to know our new members, for them to get to know us and for everyone to enjoy the company of each other in a relaxed environment.

The weather was sunny and the breeze was fresh but this did not deter about forty of our members, family and friends from enjoying themselves. This was a low key event where members brought out some of their engines and toys to play with.

Simon was busy all day forging small objects on his blacksmithing anvil, as well as giving commentary as he went. There were many interested onlookers, both old and young, and some were lucky enough to take home some of his handy work. We also had a stunt rider amongst us. This home made, motorised push bike was seen whizzing past in a blur and a trail of smoke. I am not sure if the smoke came from the bike or the rider, possible both. You can always be assured of a good attraction when Andrew turns up.

Frank had done a bit of scrounging and found a lot of curiosity items and oddments to bring along. Frank’s explanation of what some of the items were or what they were used for may be just a tall story but we have to believe him as the majority of us have no idea what the item is. Luckily Frank is not one for telling tall stories !!!!

Three generations of the Fletcher family all brought along some of their ‘toys’ for the day. They were in all stages of restoration and we could not work out who had the biggest smiles. Was it Pete watching the grand kids with their engines or the grand kids being able to play with their engines.

The Nankivell family of father, son and ‘boss’ teamed up to feed the birds. The grain crusher was put through its paces and left a bit of grain on the ground for the local wildlife.

A typical Lister was seen to take a lot of cranking to get going but it is marvellous what using fresh fuel does.

There was also a truck with a tractor on the back of it, engines, pumps, old car, and old farm machinery which would not pass the new work safe rules and regulations.

The highlight of the day was Jacob and his steam engine. Young Jacob Grima had his little steam engine steaming along nicely in the secretary shed. The enjoyment that he got with being a part of our day and being able to run his own engine was very heart warming. This little steam engine, given to Jacob by our international, German friend, Achim, ran more smoothly than his fathers truck, had more power, than his fathers truck, was probably worth more than his fathers truck, was easier to start than his fathers truck and gave a lot more pleasure to the owner and the spectators than his fathers truck, according to the comments that were heard coming from the peanut gallery. One of our more senior members, frankly told young Jacob that when he wanted to sell his steam engine, to give him the first option of purchase. Jacob had the brilliant idea to use the business card that he was given by this member, as fuel in his little burner.

It was great to see some of our new members come along and bring their family with them, and even more pleasing to see the young members and younger potential members enjoying themselves. This is our future.
The BBQ BYO worked a treat with no-one looking famished, and how could they with all of the magnificent biscuits, slices and scones jam and cream that were on offer from our master chef Jane. Thanks so very much to Jane for supplying the sweet tooth members with these magnificent goodies. Unfortunately some of our members could not be there due to illness, but they were there in spirit. It was of general consensus that this was the start of many more family fun days to come.

Just For Fun
Don’t mess with the elderly
A little old lady answered a knock on the door one Friday to be confronted by a well dressed young man carrying a vacuum cleaner.
“Good morning, Madam” said the young man, “If I could take a couple of minutes of your time I would like to demonstrate the very latest in high powered vacuum cleaners”.
“go away” said the little old lady angrily “I am broke and do not have any money” and she proceeded to close the door. Quick as a flash the young man wedged his foot in the door and pushed it wide open. “Don’t be too hasty” he commanded “not until you at least you have seen my demonstration” and with that he emptied a bucket of horse manure onto the hallway carpet.
The young man said, “Now if this vacuum cleaner does not remove all traces of this horse manure from your carpet Madam, I will personally eat the remainder”
The little old lady stepped back and sad with a smile “ well let me get you a spoon young man because they cut off my power this morning”.

An Interesting Piece of Machinery
Sand dryer

A sandbox is a container on most locomotives and trams that holds sand, which is dropped on the rail in front of the driving wheels in wet and slippery conditions and on steep grades in order to improve traction. This sand is delivered by gravity. Gravity sanding requires that the sand by dry so that it runs freely. Sand drying stoves have been in use on Victorian railways. The early method of drying the sand was very simple in concept. You took an iron stove and surrounded it with a wrapper of steel of some kind. Wet sand was poured into the space between the stove and the wrapper where it dried. The bottom of the contraption had screen on it. As the sand dried and dropped through the screen it would be shovelled and stored in a sand bin. For anyone interested, this old sand dryer on display at the railway yard in Ararat.

What’s Happening at Our Club
Bring on the New Tear
We say goodbye to the 2016 – 2017 year. Thank you so much to the executive and committee for the great work done during the past year and thanks also to our amazing members for being a big part of this great club. We were faced with some challenges and hard work throughout the year, and I feel that with the terrific leadership that we had, it has only made us stronger and we have grown to become an amazing group of members. I am sure that 2017 – 2018 will also present with a lot of work needed to be done and further challenges to face but I have confidence in the present executive, committee and members, that together we will have a strong vision for our club to move forward, upward and grow in many and varied aspects.

Proud Mack Owner
One of our committee members, and Mack boy, John Laffan is proudly displaying the ‘Best Truck’ award that he won at the Tocumwal Show and Shine. John entered his recently restored 1964 B61 Mack which he found lying derelict up at Wellington, NSW, and it needed a lot of tender love and care, hard work and the odd penny or two spent on it. John had to source a lot of parts to be able to make this truck complete and looking as good as it is. It took John about 2½ years to restore his truck to its former glory. It was proudly displayed for the first time at our last years White Truck Muster. This beautiful red Mack will be one of the many Macks on display at our 2018 Mack Truck Muster, where we will be trying to outdo our previous record of the most Mack Trucks in the one place.

If anyone would like something published in the Good Oil, please contact me by either phone 58522302, mail, or email thomobarb@bigpond.com