



BULLETIN OF THE AUCKLAND MODEL AERO CLUB INC. EST. 1928  
**December 2021-January 2022**



Time to get out and enjoy flying fields again. Ken Smith seen with his RC electric Sloworm at Karaka last year (See P.24).

# SLIPSTREAM Christmas Quiz

1. What is the name of the trophy awarded to the Champion of Champions at the New Zealand Nationals?
2. What American kit manufacturer did Bill Dean design for?
3. Name the designer of the APS Ethereal Lady.
4. Who designed the well-known Heron Gas Buggy vintage design?
5. Who designed a Control line Piper Comanche that was published in Aero Modeller?
6. What is the trophy awarded by MFNZ to members who have shown outstanding service to MFNZ and its members.?
7. What is the maximum permitted engine run for a vintage glow/diesel engine in RC Vintage IC Duration class?
8. Where are RedFin engines presently made?
9. Who was New Zealand's first woman pilot?
10. Who designed the Keil Kraft Ladybird?
11. Who was the designer of early ED engines?
12. Which New Zealand modeller designed the famous Gloworm FAI power model?
13. Who designed the famous Quaker Flash American vintage design?
14. Who set up Southland Airways in 1936?
15. What is the FAI designation for Free Flight Rubber Scale class?

[Answers on page 17]

## Editorial – Strange times

Covid confinement over the last few months has disrupted Club activities in a number of ways. It is only recently that I have heard about informal model flying activity and without monthly meetings and Indoor flying nights I have had little to report in the bulletin. That is, until I sent out a request for contributions to a 'Virtual table' and I am pleased with the photos and information that has come in about the model projects that many have started and completed, and also the repairs done.

On a personal level, it has been strange not to have been putting Slipstream together on a regular basis. I have to report that my computer died after ten years of faithful service and with a new Mac came the challenge of swapping to new software to produce the bulletin. I am now using Serif's Publisher program and after a month or so have got up to speed on it, even enjoying it thankfully.

The recent lifting of Covid restrictions has meant that outdoor flying can once again get under way and I have discussed this further in the article on page 24. Please take note of the guidelines for the use of the Karaka Sports Club field. This is particularly pertinent as we come into the summer cricket season and share the site with others. The usual calendar on p.27 is missing a number of indoor notices, but hopefully these will be resumed shortly. The RedFin Challenge had to be waived away this year but is firmly on the horizon for 2022. The cancelled Morrinsville Indoor Day may also be reconvened early in the year if there is sufficient interest.

Many thanks to Bill McGarvey and Arthur Pearce who sent in contributions this month on Rubber motor selection and yesteryears at Modelair, respectively. I was also pleased to discover the article on Angus Macdonald's KG model by Maurice Poletti, that answers some questions about engine and flights.

Immediately before closing off this bulletin I heard the sad news that Geoff Northmore had passed away. A tribute is included on p. 20.

The next bulletin will be in February, so enjoy the quiz opposite, and best wishes to all, over the festive season. Here's hoping that life will have returned to something closer to normal during the new year.

STAN MAUGER

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## Letter to the Editor

Stan,

*Compliments on yet another great magazine. I read, with interest, Bernard Scott's poem entitled The things we do for C.H.G, which is a really good piece of prose worthy of comment. Not only do his flying capabilities surpass most of ours, I would say, tongue in cheek, that he could become our next Sam Hunt! Well done.*

*Brendon Neilson*

*9-10-21*

**Photo credits:** Unless otherwise noted, all photographs are by the authors of each article.

## Virtual Table - Stan Mauger

10-11-21

There had not been a Club meeting since August, so an email went out to ask for contributions to a 'virtual table'. The response has equalled if not surpassed our table offerings most months.

**Brendon Neilson** had already sent in a photograph of the float conversion on his electric enlarged Tomboy built by Geoff Northmore many years ago. It was originally powered by a Mills 1.3 diesel, and flown on wheel undercarriage before being passed on to Brendon. As Geoff wanted his Mills returned (it had many memories for him), Brendon converted it to electric power. He reports that it is an easy plane to fly with high lift and more than sufficient power. Having always wanted a float plane, he contacted Charles Warren, who had acquired a set of floats (ex Angus Macdonald) as a give away from the table on a club night. Charles was pleased to pass them on as he was able to get some more space in his model room.

After shortening each by about 200 mm, Brendon had then bevelled the aft ends and then recessed each to fit rudders. The step was moved forward to the correct distance behind the CG to enable a clean lift off from water. A servo was mounted in the starboard float for good water handling with twin rudders. Because of the float positioning, the CG remained unchanged. At the time the photo was taken, he had not fitted the rudders, as test flying and grass landings were needed first.



**Above:** Brendon Neilson's enlarged Tomboy showing the float conversion.

**Eddie Mann** was next to send in photographs of his models. He has been using lockdown to learn how to rebuild and recondition the Keil Kraft Contestor given to him by Brendon Neilson. He is making good progress on his APS Tomboy and plans to cover both it and the Contestor with vinyl with the help of John Swales. He also has a Dumas Apache for rubber power completed to tissue covering stage, but has found working on such a small model challenging.



**Left:** Eddie Mann's Dumas Apache is coming up for covering

**Inset:** His Contestor is presently being stripped for re-covering

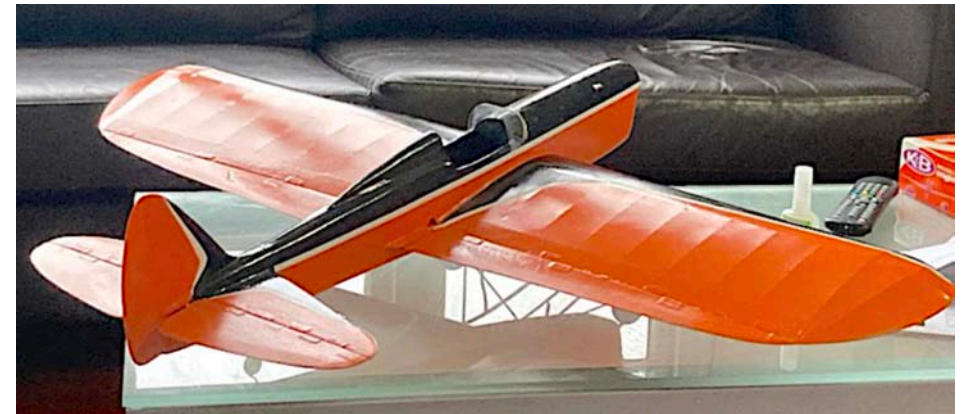
**Below:** Good progress is being made on his Tomboy set for electric power.

**John Macdonald** sent in a number of photos of his nicely built models. It was refreshing to see a couple of control line models. The first, a Keil Kraft Spectre was built from a kit given to him as a birthday present by his late dad. The kit had sat in a box on a shelf for fifty years. He felt that he should at long last build it. It is powered by a Frog 2.49 diesel. The other, a Mercury Toreador to be powered by an ED Racer, was also started many years back and was also completed only recently. Both are awaiting some flying.

John's scale models have already been admired on the table at meetings. His beautifully built Jetex Hawker Hunter was brought to the table at the August meeting last year. In exchange for the plans of which, Don Spray gave John a Peanut scale Clipped Wing Cub Kit. John's daughter asked if she could build a model and was handed the kit. She has built and completed this, a hundred percent 'all her own work'.

John's Gloster Grebe is an own design model which is theoretically for free flight with a Cox .020 Pee Wee, but it still needs finishing. A test shows that it does glide. Shown partially completed in the photograph, his 1/24 Cleveland DVII was his first attempt at printing lozenge tissue. He has also made a start on a Diels F4B2, seen to the right.

The Cleveland Gee Bee was built to  $\frac{3}{4}$ " scale. Other scale models including an Aeronca C3 and Folkerts also built to  $\frac{3}{4}$ " scale will be included in the next issue of Scale News.



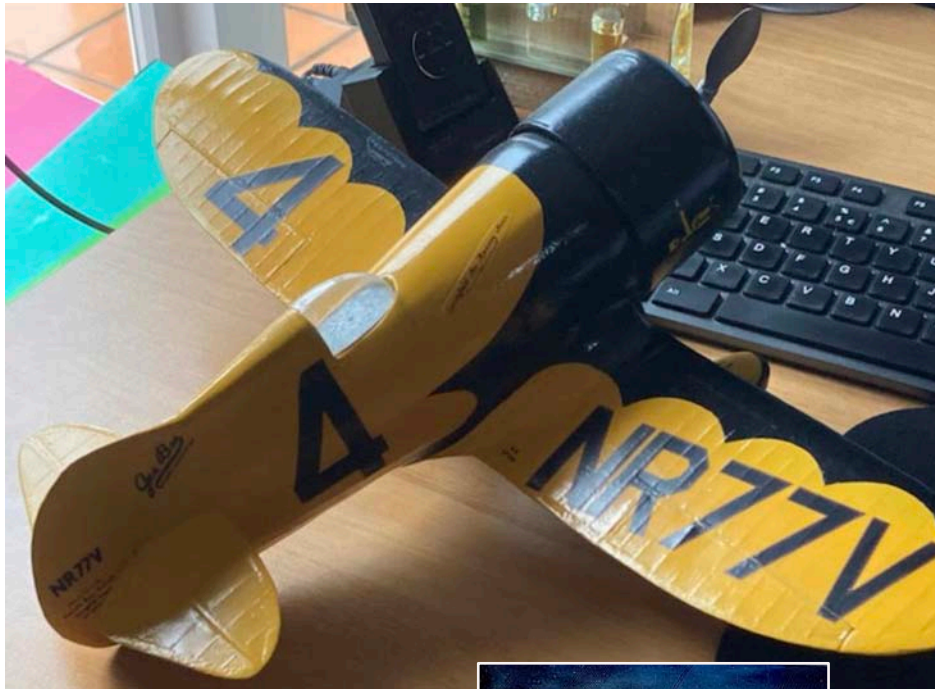
**Left:** John Macdonald's pristine Mercury Toreado just needs engine installed for some test flying.

**Upper:** His KK Spectre is also completed and awaiting a test hop.

**Above:** John's Gloster Grebe was built for a Cox Pee Wee .020. The models in the foreground are a 1/24 Cleveland Fokker DVII (left) and a Diels Boeing F4B2 fuselage (right).

**Paul Evans** reports that the first thing that he did wrong over lockdown was to look at a pile of plans. He found one that he decided to build, a Shavrov Sh-2. The full size plane was built in USSR and first took to the air in 1930. It was built from wood and powered by a Shvetsov M11 5 cylinder air cooled radial. Sixteen were built, some being used as air ambulances. They had an endurance of from four to eleven hours and could land on water or land. The wheels fold up and the wings folded back. In 1936 they stopped building them but in 1939 another 700 were built and they stayed in service until 1964. The wingspan was 42 feet and the maximum speed 87kph. The lower wing had sealed sections to keep it afloat if it crashed.

The model has a wingspan of 31 inches with no folding wings and was constructed as normal then covered with tissue and spray painted. The lower wings are solid and are in two then plugged into the main fuselage which is all sheet construction with the floats fixed to it. The model will be powered with a small electric motor and he will be looking to others for help. The Sh-2 may fly as a free flight model but if no go, then at least it will be past the time of lockdown! .



**Above:** John Macdonald's Gee Bee built at 3/4" scale from a Cleveland plan.

**Inset:** This view of the unpainted model shows the intricate construction.

**Right:** John's daughter at work on her Peck Clipped Wing Cub. The model just needs noseblock, rubber and glazing to complete.



He has also started work on a Rearwin Speedster 46 inch span model for RC and electric using four channel including rudder, elevator, ailerons, and motor. It was designed by Philip Rawson but is not a very good plan so there has been a bit of make it up as you go. On the plan the wing was 2 sides that plug in but he has built it as one. Wing construction is normal for the wing with sheeted top and bottom wing leading edge with capping strips over ribs and laminated wing and tail tips. The undercarriage was fitted under the fuselage and not fitted inside as normal. The motor has to be sorted out, R/C gear fitted and covering completed.

Apart from some repair work on other models this was about all Paul has done as a result of lack of enthusiasm over lockdown, still it seems to be good productivity. Like us all he is longing to get on the flying field again.

**Bryan Spencer** has sent in a good report on his building over lockdown. He has not built anything to fly himself but has done a little bit to provide models for some of his nine grandchildren. Two grandsons aged 30 and 26 are the oldest and Harlee the third grandson is the youngest. In between are six granddaughters.

Harlee's seventh birthday was on 1 September. He is a real aircraft and car fan and is starting to assemble Airfix plastic kitsets, with help from his dad. Bryan had built aircraft models for him before. This time he decided to build him a small rubber powered model and a hand launched glider for his birthday. When Bryan mentioned this to his other son, he said that the youngest four granddaughters would also like a glider each. When Bryan used to make gliders for him and his brother and sisters and also their cousins, they all had great fun. So, there it was. A rubber model and glider for Harlee and five gliders for his dad and his cousins.

Harlee is a fan of the F4U Corsair so for the rubber model I chose the Guillows profile Mini Model Corsair. There was a range of these kitsets of World War Two fighter aircraft but only about three are still available. The Corsair is not available now. Plans and parts sheets for the whole original range are available on the Outerzone and Hip Pocket websites.

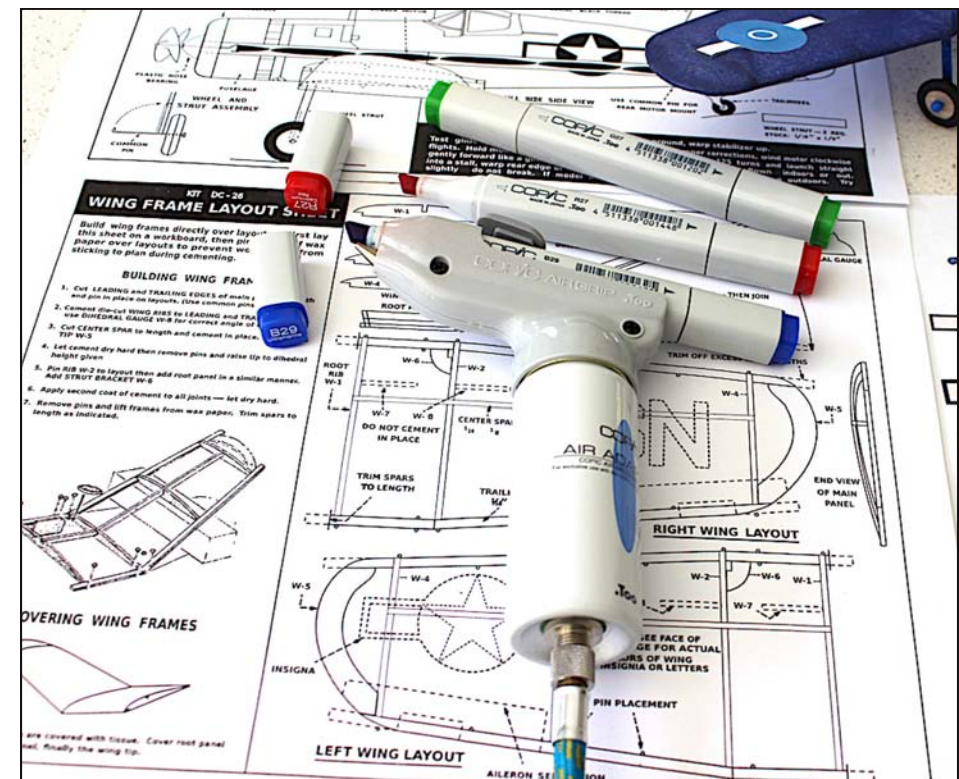
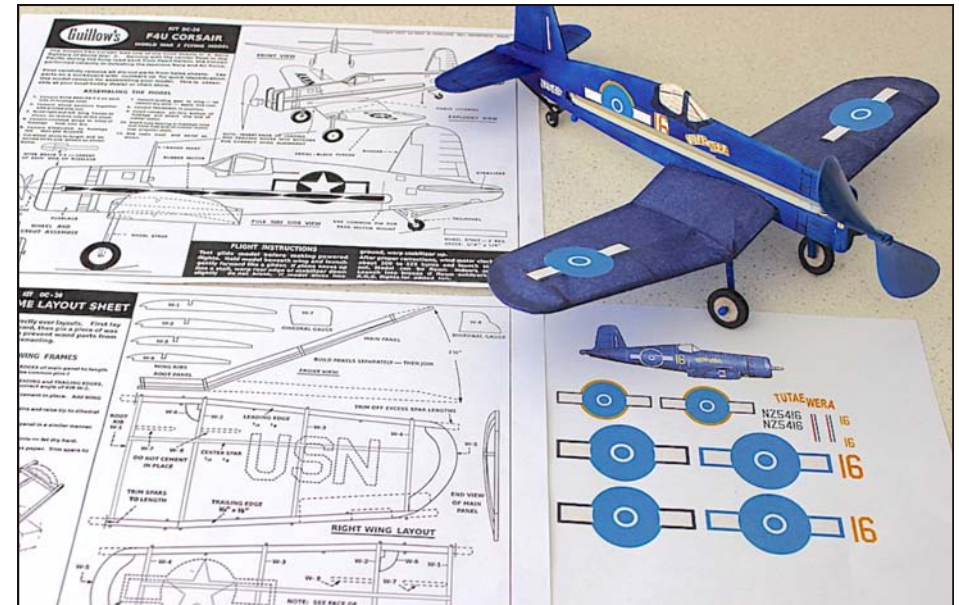
With the plan downloaded and a Kaysun propellor from the spares box, the model was soon built. The wing is built up and tissue covered. The rest of the model is sheet balsa. He chose to decorate the model as an aircraft that flew in the Pacific with the RNZAF. He had the blue Jap tissue for the wings but the rest of the model needed painting and this was achieved using a Copic Airbrush System bought a few years ago. This can be driven by an aerosol can or a compressor. he used a small diaphragm type compressor. The 'paint' for the system came from a Copic felt marker which was inserted into the airbrush. Copic provide a selection of 214 different felt marker colours. The markings were downloaded from the Internet and printed on to printer paper at the appropriate size. They were then cut out and applied to the model with a stationery glue stick.

The six gliders are the Throw Up design which was published in the May 1979 issue of Model Builder Magazine. These have a nine-inch wingspan and should provide a bit of fun for the youngsters. Some of you will admire the quarter grain balsa he used and which he bought from Trevor Martin's estate. Decoration of the gliders used the same method as for



**Left:** Paul Evans's Shavrov Sh-2 is an unusual free flight scale amphibian, destined for electric power.

**Centre and left:** Paul's Rearwin Speedster is a 46 inch span RC model for electric, designed by Philip Rawson.



**Upper:** Bryan's fleet of the *Throw Up* glider design, showing some beautiful quarter grain balsa!

**Above and opposite, upper:** The Guillows Corsair kit nicely finished in a Royal New Zealand Air Force Pacific colour scheme.

**Opposite lower:** The Copic Air Grip system was an excellent quick and easy media for colouring the Corsair.



**Upper:** Ricky Bould has been making progress on the cockpit detailing of his Max Holste Broussard for free flight power scale, based on the Fearnley plan.

**Above:** His VMC Cessna 140 has built up into an attractive Kit Scale Model.

the Corsair. The images on the wings are World War Two nose art downloaded from the Internet and printed at the appropriate size to suit the gliders. The names use a font from Microsoft Word, also printed at the appropriate size. A glue stick was used to attach the decorations.

Because we went into lockdown in mid-August, before Harlee's birthday, he hasn't seen the models yet, only photos on WhatsApp. His cousins are in the same situation. When restrictions are eased they will see if they can get together for flight testing to ensure all is in order for the issuing of full airworthiness release certificates.

**Ricky Bould** has achieved a lot of progress on a number of unfinished models and made a goodly number of repairs and improvements to others.

The first was a remodel of a Dumas PZL 11c kit that had been started by Keith Trillo. A hard look at the fuselage revealed a very weak structure around the undercarriage where the wing struts are also anchored. This has been strengthened by infilling between the stringers back to the cockpit. This will hopefully ensure the undercarriage will remain in place. A similar exercise was done on the wings. They are now reinforced in the centre section that is very thin, and the leading edge has been sheeted top and bottom. They are now covered and painted in the Polish colours.

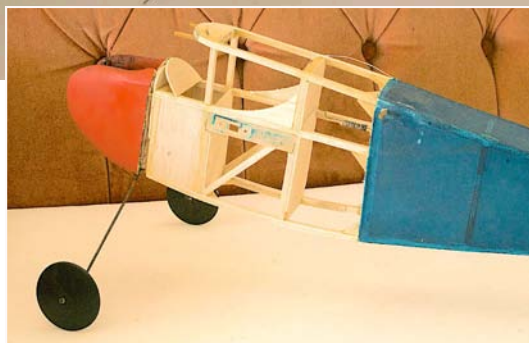
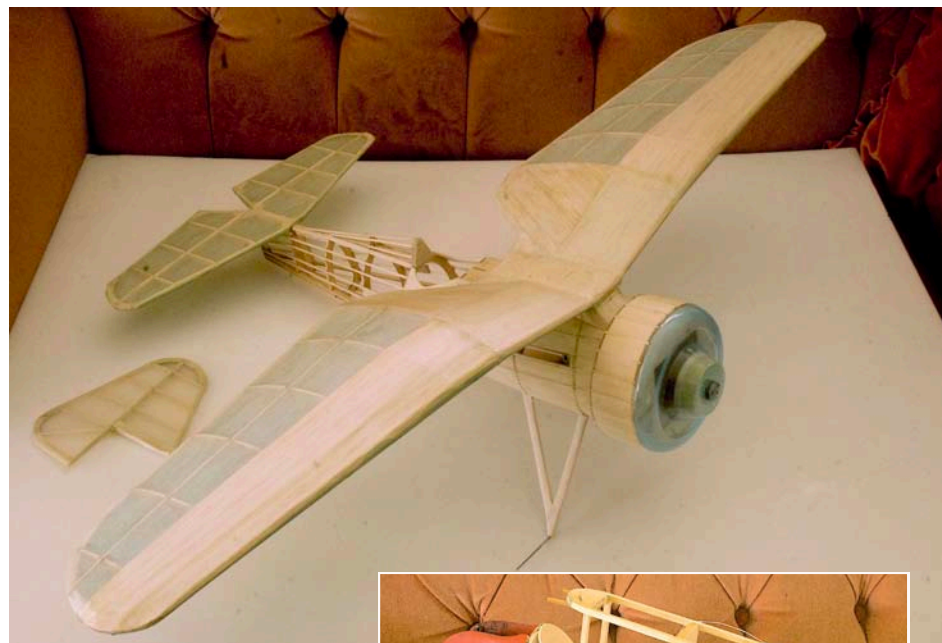
A Tomboy that had an arrival that demolished the centre section of the fuselage has now been repaired and is ready for radio installation and re-covering. It is Mills .75 powered and a light model. The fuselage is silk covered and the flying surfaces are tissue over Mylar. His Miles M18 was a new project for a Hip Pocket Aeronautics Cook Up and is also in the finishing straight. This is a 16" simple model designed by Mike Nassie.

The other new build was a VMC Cessna 140 that awaits trimming. It was a very quick build with the laser cut parts flying together with little effort. Weight has come out at 24 gm. Also proceeding at a more leisurely pace has been a 42" Max Holste Broussard for a SAM 75. engine. The Cockpit and passenger cabin are currently being worked on. This is his second model of this type and was started when major dimensional errors in the first model, based on the Fearnley plan, were found. The fuselage was over 2" short behind the wing. Three Modelair Hornets await trimming when we get a calm day.

A very old Peck Baby Ace done in Canadian colours of CF-RAC awaits attention requiring trim on the wing after re-covering, and repair of tissue damage on the fuselage. This model is powered by a Tornado 69 CO2 motor that is an hybrid of a Humbrol Shark crankcase and a Gasparin piston and liner assembly. There is a long line of models awaiting a visit to the flying field when we are let out to play.

**Stan Mauger** has been working on repairs but has also had time to get going on a Clipped Wing Piper Cub for Peanut Scale built from the Peck plans, to fill a gap in his indoor fleet. He has completely rebuilt his Keil Kraft Auster Arrow after the original model was showing the ravages of a number of years of competition flying. He has nearly completed a Skyleada Curtiss Owl. The Arrow and Owl will be included in the next Scale News.





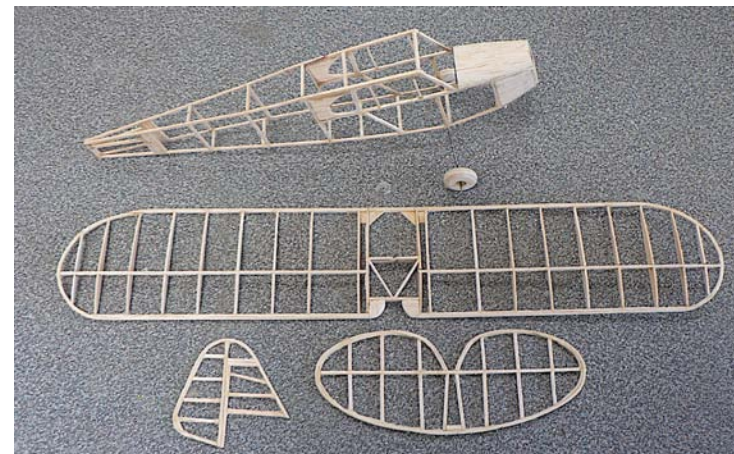
**Top:** Ricky Bould's Miles M18 is ready for some testing.

**Above:** This view of his PZL from the Dumas kit shows additional leading edge strengthening to the wings.

**Right:** Some forward fuselage reconstruction on his RC Tomboy.

**Don Spray** has two models ready for testing, his Stinson Reliant and Hawker Hurricane. The Stinson was built from an enlargement of a Peerless plan from the Trevor Martin archive. The plan is nicely detailed and this has resulted in an attractive model which Don has completed in an authentic colour scheme of the era. His Hurricane is also from an enlarged plan. This time, from the McHard plan in the Flying Scale Models of WWII Model Builder plan book. Still at uncovered stage, his Fairchild Ranger is built from a double size enlargement of the Dumas Peanut Plan. All three models are rubber powered.

**George Fay** has been quietly working away at both repairs and new projects. He had found time to repair both his 48" Curtiss Robin and smaller Kawasaki Tony. These are both rubber powered and excellent flyers. New recent models, all for rubber power include a Spitfire, Corsair, SE5a and Albatros. His Corsair is already flying well but the Spitfire is in need of a prop change or more power. The SE5a is just completed and not yet tested. His Albatros was built from a kit handed to him by Peter Jackson, Australian scale flyer, at a Trans Tasman Scale weekend.



**Left:** Still some work left on Stan Mauger's Clipped Wing Piper Cub for Peanut Scale built from the Peck plan.

## CHRISTMAS QUIZ ANSWERS

1. The Airsail trophy is awarded to the Champion of Champions at the New Zealand Nationals
2. Bill Dean contributed free flight scale designs to Jetco
3. Vic Smeed designed the APS Ethereal Lady.
4. The well-known Heron Gas Buggy was designed by Frank Kagne
5. New Zealand modeller Laurie Ackroyd designed the Nationals winning Control line Piper Comanche, plans for which were published in AeroModeller.
6. The Macdonald Memorial Trophy is awarded by MFNZ to members who have shown outstanding service to MFNZ and its members.
7. The maximum permitted engine run for a vintage glow/diesel engine in RC is 30 seconds in Vintage IC Duration class
8. RedFin engines are currently made in the Ukraine.
9. Gladys Sandford was New Zealand's first woman pilot gaining her licence in 1925.
10. Stan Russell designed the Keil Kraft Ladybird?
11. Various authorities state that early ED engines were designed by Charles Cray (or Charlie Gray).
12. John Sheppard designed the famous Glow Worm FAI power model.
13. Paul Karnow designed the famous Quaker Flash American vintage design.
14. Pioneering pilot Arthur Bradshaw set up Southland Airways with a De Havilland Puss Moth.
15. F4D is the FAI designation for Free Flight Rubber Scale class.



**Above:** George Fay's well flown Curtiss Robin and yet to be tested SE5a and Albatros.  
**Left:** His Spitfire is in testing phase but his Kawasaki Tony and Vought Corsair are proven flyers.



**Top:** Don Spray's Rubber powered Stinson Reliant is the early version with parallel chord wings.  
**Centre:** His Hawker Hurricane is ready for testing.  
**Below:** Good progress is being made on his Fairchild Ranger.

## Geoffrey Northmore (1932 – 2021) – A Tribute

Geoff joined the Club about twenty years ago and was soon an active flyer in the Tomboy events of the time flown at Karaka. One of his most regularly flown models was his enlarged Tomboy that started life with a Mills Diesel and then after some experiments with a Mills twin was converted to electric. He also flew gliders at Karaka.

Through his articles for Slipstream and through some unusual models brought to the flying field, Geoff distinguished himself as one not afraid to push the boundaries in unorthodox model design. In his years in England he developed a number of experimental models. With the aim of finding something different to fly at an Old Warden day he turned to an issue of SAM 35 Speaks where he found a small three view of the Swedish diesel powered AKKA, a canard design from 1945. A development from the first model did go to Old Warden, but the design remained a work in progress. His Ludd series of models blossomed into tailless wings, tailless biplanes and more conventional biplane designs. The name reflected Geoff's sense of humour. He envisaged an impossible airline crew and a mythical Co-Pilot named Ned Ludd, as an idiot who designed weird aeroplanes, so the Ludd Bug was named in his honour.

The final version has survived and continues to fly having been handed on. He contributed articles of his experimental models to British RC magazines that published plans for them with accompanying building articles. Geoff was also interested in finding low-cost covering material more durable than tissue and covered various models with polyester tissue and Vilene, a non-woven polyester material sourced from the Spotlight store. His enlarged Tomboy that is handed on and still flying was covered in this material.

Through his RAF years of flying jets and his experience as an airline pilot for British Airways he became an accomplished airman, but was a humble person when it came to drawing on this knowledge in discussions about aeronautical questions that might arise in the clubroom or elsewhere. His article on his life in full-size aviation that appeared in Slipstream was both a revelation and a reminder of his considerable experience in aviation.

We will miss Geoff for his refreshing ideas on model design, his deep knowledge of the field and his humble friendliness. We will be reminded of him through his models that continue to be flown by those in the Club who have inherited them.

STAN MAUGER

### Opposite

**Top:** Ludd Bug 3 required a decrease in tip dihedral to cure roll tendency.

**Centre:** Geoff's Ludd Bipe, at the end of the Ludd series of designs.

**Lower:** Having seen an APS Jabberwocky vintage team racer on a meeting table, Geoff could see the potential for enlarging this for an RC design.





**Top:** Geoff with an electric glider and disassembled Tomboy.

**Centre:** Geoff's enlarged Tomboy getting away at Karaka in 2009.

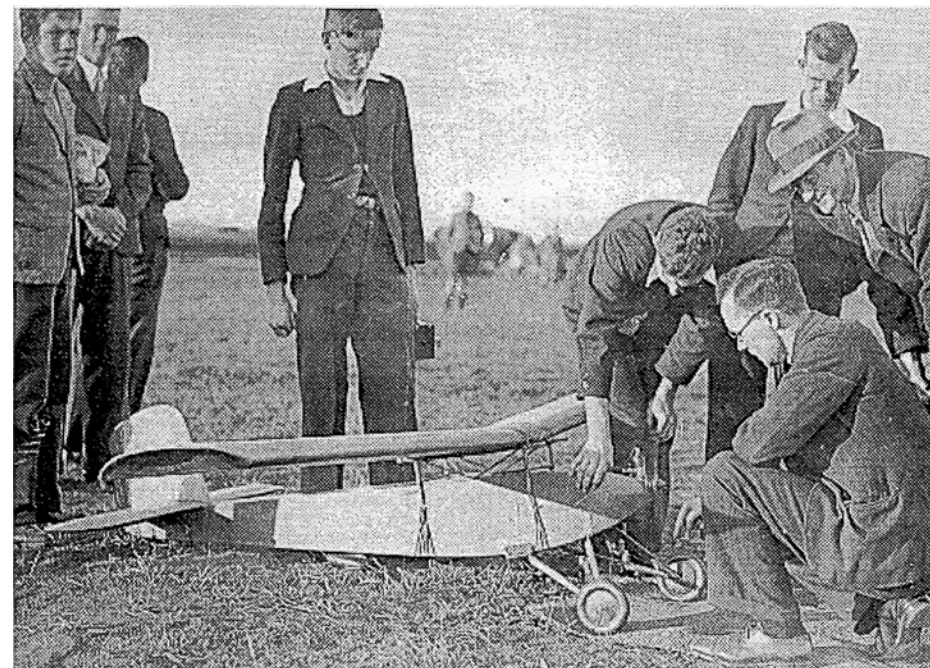
**Left:** Experimentation with a Boddo Twin Mills in his Tomboy.

## Looking back - AMAC's first Gassie

Amongst the models from Angus Macdonald that were found new homes early this year was the Brown Junior powered KG which is destined to join the MFNZ Museum collection. The following is an abridged article from the October 2001 Slipstream by Maurice Poletti that recounts its early flights - Ed.

In February 1936, at Mangere Aerodrome, the KG built by Fred Macdonald, Basil Chinnery-Brown and other Club members made AMAC's first gas powered model flight. Shown below is the model with some of the Club members just before the memorable take-off. Unfortunately, the identities of all those pictured is not known.

On the first flight, the aircraft began climbing away until the engine stopped. The KG performed perfectly, dropped its nose to pick up flying speed, but alas, impact with the ground prevented the model from ever attaining it. The second attempt provided the same result. Damage was confined to the nose and undercarriage. The post mortem showed that engine vibration had shifted the batteries until the ignition circuit opened. The damage was repaired on the field, the problem diagnosed and the fault corrected. Then to quote 'Propellor', (Fred Macdonald) in his Auckland Star column of June 20 1936, "... The big fellow took off, circled the 'drome, and headed for the mangroves, where the motor ran out of gas - a small amount having purposely been put in. Altogether a successful trial, and just wait until we get brave and fill the tank."



**Above:** Amongst those gathered around the KG are Eric Rose, standing with the camera behind the KG, Ivan Chinnery-Brown holding the model, Fred Macdonald, who has just started the Brown, and on the right wearing glasses, Colin Scrimgeour, perhaps better known as Uncle Scrim who was a prominent radio personality of the day.

## Club flying sites

After some weeks of initially being homebound and then limited to individual walks in parks the present Covid rules allow us to get out in socially distanced groups of up to twenty-five people. This means that we can once again use our flying sites for model flying in the Auckland area. Hoteo, Aka Aka and of course Karaka Sports Park sites are all open to use providing we keep to the Covid rules. Unless there is a scheduled event to be flown, the customary phone around to contact flyers likely to be interested in coming to the flying site when weather looks good, is probably best. Phone the contacts as below, if you would like to use any of the Club sites.

### Hoteo

If you would like to venture to Hoteo please contact Paul Evans who will be able to confirm that the farm is open and whether any others are planning to make the journey there on the same day. A reminder, this is a large space suitable for free flight models that can need good recovery. It is also a well proven area for vintage RC flying.

### Aka Aka

Aka Aka has not seen much use over the last few years, but is still an available Club site. If you would like to fly there contact Lloyd Hull, Charles Warren or Brendon Neilson.

### Karaka Sports Park

Karaka Sports Park can be used again, subject to social distancing and with a maximum of twenty-five people. On the basis of normal flying days, this limit should not be a problem. For most of us, this is a very useable site, however there are limitations on the flying of more powerful models that are better flown at dedicated RC sites. To this end, the Club committee has approved the guidelines for this site set out below.

The Club does not have its own control line site. Contact Stan Mauger if you would like to fly these models. He can provide contact details for the use of other club sites. Until Covid rules change we will continue to be unable to use the Drury School Hall for indoor flying.

## Guide for Operation of Model Aircraft at the Karaka Sports Ground

### *Model Parameters.*

Maximum Engine Capacity	5 cc
Maximum Electric Motor size	375 Watts Manufacturers rating
Maximum Wing Loading	20 oz per square foot

Consideration must be given to model speed due to the presence of rugby goal posts and lighting standards that represent a risk to safe operation.

### *Parking*

Cars should be parked at a safe distance from the flight line and pits.  
No parking on playing fields.

### *Flight Line*

A flight line must be established at a safe distance from the parking area in a direction that ensures model aircraft do not fly over the parking area or groups of pedestrians.

### *General*

Only RC Fliers with a MFNZ Wings Badge may fly unsupervised. At all times consideration must be given to other fliers who may want to fly.

## Modelair and me - Arthur Pearce

My first encounter with balsa was about 1938/39 as a preschooler when I spotted a bike shop in Hamilton selling RTF panel type gliders and I always had to have one before catching the bus home. I recall one making the trip whole. Fast forward to 6th April 1941 and a birthday parcel contained a small green printed box with MODELAIR printed in large letters on both sides and the name Spitfire rubber stamped on the end. Little was it known the effect that this would have on my life and future fortunes. When opened to get at the aeroplane and finding only a plan and a bundle of bits, the look of dismay on my face must have been huge. "Don't worry" I was told, Dad will put it together in his spare time over the weekends(?) Only the fuselage sides were built by the time we shifted to Auckland a year later.

This family upheaval was for my Father to take over the management of a Hardware & Building Supply store in Newmarket. It was not long before I had learned to sort out the transport system in the big smoke and hop a tram (light rail) on a Saturday morning and spend a bit of time behind the counter. The novelty of this soon wore off and exploration of the local shops was called for. The outlook to the North was interesting with lots of shop windows. The outlook to the South looked a bit grim with what looked like nothing but showrooms of used cars. Amid all these was found one small shop with a window of two glass panels. I am sure the imprint of my nose is still in both of them. The display contained therein was of just model aircraft and above was that magic word 'MODELAIR'. That wrecked any chance I ever had of a rich old age.

So began an almost weekly, "Dad, at lunchtime can you go along to Modelair and get me?" It didn't take long for Fred Macdonald to latch on to this regular customer and raise the subject of my joining the A.M.A.C. With a good push for me one shilling and six pence (15 cents) was extracted from the household budget and the deal was done.

On joining the hardware staff in 1948 I was able to do my own lunchtime shopping. Fast forward again some ten years or so I found myself short of employment and talking to Angus. He said, "The school holidays are coming up and we get busy and 'ERB', (Noel Hewitson) could do with a hand out the back, would you like to help us out for a few weeks?" That was my chance to learn a bit about the other side of the Trade and get a bit of my pocket money back. On being employed at Mangere and later Ardmore, visits to Newmarket were restricted to Friday nights mainly for a free read of the latest mags. and to have a natter with the gang!

### **POSTSCRIPT:**

In the early fifties all balsa cutting was moved, to of all places, Waihi! The factory had a staff of one, Alby Symes, of the North Shore Club. The only reason I can think of is there must have been some very good incentive scheme going to increase employment in the town. PYE set up a production unit about the same time to turn out T.V. sets. Modelair called it quits after a year or so and came home. To make space, the basement was excavated and fitted out with a 'saw room', staffed by Fred Percy, bulk balsa storage and a place for the boss to park his car. Alby took over running retail and mail order. The dig out was a real treasure hunt as the East side of Newmarket was all Railway owned leasehold land, being the site of the early workshops. All sorts of interesting bits were found.

## Winding rubber motors

For indoor or outdoor rubber models it is helpful to know safe numbers of turns to wind. The most commonly available rubber is Tan II Super Sport. The table below sets out maximum numbers of turns for various combinations of strands and lengths of rubber. As the sizes are for 1/8", 3/16" and 1/4" it is of most use for outdoor flyers.

1/8 Inch TAN II		3/16 Inch TAN II		1/4 Inch TAN II	
Strands	Turns/Inch	Strands	Turns/Inch	Strands	Turns/Inch
2	106	2	102	2	99
4	75	4	72	4	70
6	61	6	59	6	57
8	53	8	51	8	49
10	47	10	45	10	44
12	43	12	41	12	40
14	40	14	38	14	37
16	37	16	36	16	35
18	35	18	34	18	33
20	33	20	32	20	31

*Left:* This table was found in a search of the Hip Pocket Aeronautics website.

The following table is from an article entitled Peanut Power, by Paul Lagan that dates back some years to the days of Pirelli rubber. It may still be of interest to Peanut flyers who could use it as a basis for estimating numbers of turns. The reference to larger rubber sizes on this chart may similarly be adaptable for Hangar Rat flyers. Even though these tables are useful, modellers should bench wind motors to find the maximum number of turns per inch. The maximum turns possible of course, depends on rubber age, state and use and ultimately personal testing is the best guide for a modeller's rubber selection.

Rubber width (.041 stock)	Approx Weight in grams (18" in loop)	Max Turns per inch	Model weight (grams less rubber)
.075	1.35	93	7-9
.080	1.55	90	8-11
.085	1.64	87	9-12
.090	1.74	85	11-14
.095	1.84	83	12-16
.100	1.94	80	15-19
.110	2.13	76	18-24
.120	2.32	73	23-28

For Kit Scale, where model weight (especially monoplanes) will probably be in the region of 20-30grams with rubber, rubber width should be .130"-.180" for a loop that is up to 150% longer than the space between propellor shaft and motor peg, depending on rubber use and hall temperatures. When flight testing, start at the lower sizes.

All of the above assumes that you have a rubber stripper to cut rubber to size. Many of the Club indoor regulars will be happy to help with stripping rubber if you need help. Just ask.

## Calendar December - January

For information about the location of club fields and cancellations or postponement of flying, contact the field stewards.

### KARAKA

Karaka Sports Park

**Free flight and radio flying within field limitations**

**NDC RC Vintage events** (refer to MFNZ under NDC)

### HOTEO

Sundays

Call the field steward if you would like to go up and do some free flight and vintage flying there.

**NDC FF Vintage events**

(refer to MFNZ under NDC list).

**Hoteo Steward**

Paul Evans 479-6378 ziplly@xtra.co.nz

### AKA AKA

Saturdays & Sundays

Intending flyers should phone Lloyd Hull to arrange to fly  
Lloyd Hull 09 235 2890

### CONTROL LINE

As advised

Control line flying  
Intending flyers should phone Stan Mauger to confirm where and whether there will be flying.

**C/L Steward**

Stan Mauger 575 7971 stanm09c4@gmail.com

### INDOOR EVENTS

Drury

**Drury School Hall**

**All Drury Indoor nights and Club competition suspended until Covid levels allow us to resume.**

**Indoor Steward**

Brian Howell 020 4121 5201 b.how@xtra.co.nz

## Calendar Looking Ahead

### KARAKA

2022

**RedFin Precision Event** as notified

**Peterborough-Auckland Cloud Tramp Challenge**  
as notified

### MORRINSVILLE

**October 2022**

(date to be notified)

**Indoor Free Flight classes**

Hangar Rat, Hand Launched Glider, Modelair Hornet.

**Indoor Free Flight Scale classes**

Open Rubber Scale, Peanut Scale Memorial Scale, and Kit Scale.

### NATIONALS

Refer to MFNZ website for details

## OFFICERS OF AUCKLAND MODEL AERO CLUB INC.

Patron	Vacant		
President	Ricky Bould	478 8949	unimec1994@gmail.com,
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	Brendon Neilson	09 239 3204	2neilson@gmail.com,
	Charles Warren	09 238 9430	cpwarren@ps.gen.nz

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## Club subscriptions

NZMAA Affiliation is mandatory for Club flying

**Senior** \$50 (+\$95 NZMAA)    **Family** \$55 (+\$100 NZMAA)

**Junior** \$10 (+\$30 NZMAA)    **Non-flying** \$40

Intending members with current NZMAA affiliation pay only the AMAC sub

## Please make payments to

The Treasurer Auckland Model Aero Club

Virginia Fairgray,

3 Kanohi Tce Mangere Bridge 2022, Auckland

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## NEXT CLUB MEETING AND NATTER NIGHT

Monthly club meetings 7.30pm at ASME Clubrooms,  
Peterson Reserve, Panmure.

**All meetings suspended until Covid rules allow  
indoor gatherings again.**

## Trading table:

Buy, sell, and free to a good home.

**Visitors or intending members welcome**