



BULLETIN OF THE AUCKLAND MODEL AERO CLUB INC. EST. 1928
November-December 2020



Seen at the October Drury Indoor night, Keith Trillo's new models to test Super capacitors. See article on p.22. (Photo: Stan Mauger)

SLIPSTREAM Christmas Quiz

1. Who designed the Cloud Tramp?
2. What is the name of the Cloud Tramp international commemoration?
3. What is the FAI designation for Peanut Scale Class?
4. Which New Zealand modeller designed the Papanui Tavern HLG?
5. When was the first Patetonga scale contest day held?
6. What is the minimum weight for a Hangar Rat under MFNZ rules?
7. What was the founder of Bettair Model Co, New Zealand?
8. What is the MFNZ class for discus launched gliders?
9. Which American airline sponsored early payload events?
10. Who designed the APS Miranda seaplane?
11. What is a simple way to calculate 3° incidence?
12. Who was the well-known free flight scale flyer who designed the APS BE12?
13. Who designed the Dervish, fifties stunter for Mills 1.3 diesel?
14. At what airfield is the Shuttleworth Collection housed?
15. Who designed the full size North American Mustang?

[Answers on page 7]

Editorial – Reflecting on the year

The warm weather is here, end of year arrangements are probably already being made in most households and some of us heading off to the Nationals are probably about to look at models that might be sorted out for the annual trip to the Nats. These are refreshing thoughts after the strange year that has preceded where we are presently. As we are all aware, we have been particularly fortunate, and grateful for the way in which Covid has been managed in our country and discussions of aero modelling matters may seem trivial compared with the health issues that some have had to deal with. On the other hand, I am greatly relieved that without continuity of meetings and bulletins some months, we have arrived at some positives to reflect on. Monthly meetings are back on track and contests have been run and supported.

The Club has once again made a commitment to competition beyond Auckland via the Morrinsville indoor day, run in conjunction with the MFNZ Free Flight and Control Line SIG. This was a successful event that brought modellers together from across the North Island. The Peterborough-Auckland Cloud Tramp Challenge was finally flown off recently in splendid weather and keeps a competitive link with the PMFC going. There has also been Hangar Rat contest flying at Drury, keeping up indoor flyers' expertise in this class. Because of the uncertain weather that we have come to know well at this time of year there have also been a number of flying mornings called at short notice, at Karaka and also Hoteo. There are reports on many of these flying days in this issue.

Club members will be aware of the sad news that we lost Angus Macdonald in September. There is a tribute to Angus, recognising his accomplished life in aero modelling, on page eight. The Club Committee have decided to run a commemorative event to remember Angus. This will be for Modelair Hornets (what better model?). There will be more details in the next Slipstream.

Finally, to those heading to the Nationals, good luck! Best wishes for Christmas and the New Year, to all.

Stan Mauger

Slipstream contributions

Contributions of reports on flying activity as well as photos and information about latest projects are both very welcome.

Please just send them in.

The deadline for articles for the November-December Slipstream is December 20

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

Monthly Club Night - Stan Mauger

12-10-20

Present were Ricky Bould, Paul Evans, Brian Howell, Harold McGrath, Stan Mauger, Brendon Neilson, Ken Smith, Bryan Spencer, Don Spray, Charles Warren, Tony Woodroffe and visitor Ken Buckley.

President Ricky Bould reported on the very successful Morrinsville indoor contest day held on Sunday October 10, before turning to the items on the table. Stan Mauger had brought a large clam style box containing a number of stick and tissue indoor models built by the late Angus Macdonald.

Next was Brendon Neilson's large electric powered SAM 56, which had received some further detailing. Brendon commented on how it was a delight to fly. Geoff Northmore who designed and started the model explained that he had seen a 3 view of an American pursuit aircraft in an issue of SAM 35 so years ago and this had been the basis for the design of the model.

Don Spray had brought two scale models , both for rubber power. The first, an Auster Aiglet had started as a 150% enlargement of the well-known Modelair Autocar flying scale model. He had altered the rear of the cabin to follow the Aiglet contours and completed it in the colour scheme of the aircraft of the Marlborough Aero Club, once

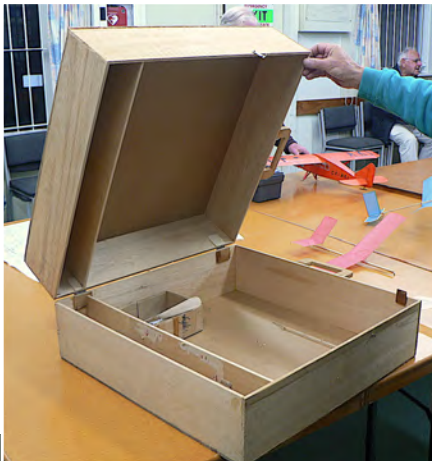


Above: Brendon Neilson showing off the blue under-wing scheme of his SAM 56, and also the finishing touches to the exhaust.

flown by Keith Williamson. There was not much left to do to complete the model. It is of 27" span, which Don prefers for small park flying. His other model was a scratch built Yak 9, also for rubber power. The model was built from an enlarged 3 view that required the addition of some lofted cross-sections for building formers. Like the Auster, the span of this model was 28", being kept below 30".

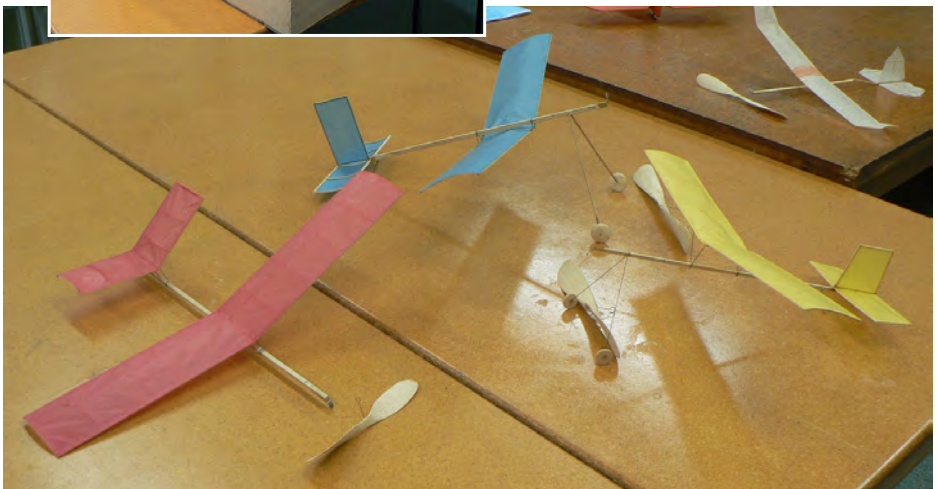
Ricky Bould's 34" Flyline Bellanca Skyrocket was in the colours of pioneering Canadian bush pilot Wop May's aircraft dating back to 1932. May's plane was used to make flights to uranium mines and to Canadian communities. The model weights 100g and will have a wooden prop. The bright orange finish was achieved by spraying orange tissue with orange dye to enrich the colour.

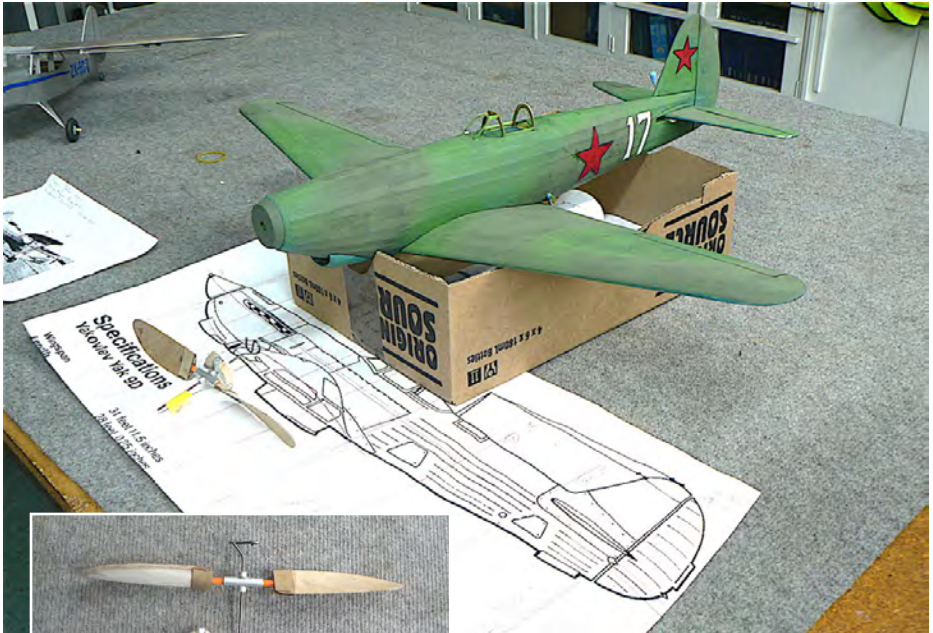
With the table done, it was time for the usual chats before heading home.



Left:
New owner, Tony Woodroffe, showing off the large lightweight box of balsa and corrugated card construction, made by Angus Macdonald.

Below:
Indoor stick and tissue models from yesteryears built by Angus. How many can you recognise?





Top:
Don Spray's new Yak 9 is progressing well.

Inset:
The two bladed propellor and clever hub, made from two plastic pizza box spacers glued together for a three blader.

Above and left:
Auster Autocrat for rubber power, just awaiting glazing and motive power.



Upper: Views of Ricky Bould's Bellanca Skyrocket built from the Flyline plan is getting near some testing. Note the nice engine detailing.

Answers to the Christmas Quiz on page 2

- | | |
|---|---|
| 1. Charles Hampson Grant | 10. Peter Holland |
| 2. Memorial International Mass Launch of Cloud Tramps [MIMLOCT] | 11. In Imperial measurement, approximately $3/16''$ at $3\ 5/8'' = 3''$ |
| 3. F4F | 12. Eric Coates |
| 4. Paul Lagan. | 13. Cyril Shaw |
| 5. 2007 | 14. Old Warden |
| 6. 6.0g | 15. James H "Dutch" Kindelberger. |
| 7. Gordon P.S..Smith | |
| 8. F3K Discus Launch Glider | |
| 9. Pan American airlines [PAA] | |

Angus Macdonald 1927 - 2020

Angus was such an accomplished aero modeller it is hard to find some area of aero modelling in which he has not been active. He was something of a trail-blazer in various new Nationals classes and as NZMAA records attest, he won many of these when they were offered as contests. When the first Nationals was held in 1948 he was Champion of Champions.

Most of us who build model aircraft first met Angus at Modelair, the shop and factory which Angus took over from his father in 1952. Angus was the tall man behind the counter, ever ready to find the model items that we wanted. He seemed to be able to answer any questions about aero modelling. He also designed many models for Modelair that have become legends since that time, including the Kea that was designed in two sizes for the small diesels of the day. He built an enlarged one for electric power, more recently, to fly in vintage, an area of aero modelling that he actively supported. The most famous of his designs and probably, the most loved by all was the Humming Bird.

Angus enjoyed flying indoors and was hard to beat in these classes, particularly in Hangar Rat, but also in scale classes where his Modelair Auster, designed by him was a regular winner. His Nesmith Cougar, also designed by him, won early Peanut Scale events and continued to regularly win this event for a further forty years.

His interest in gliders or soaring models saw him being a founding member the Auckland Soaring Club which flew at Ambury Park. He actively flew radio controlled gliders there, as well as in many other contests, for thirty five years. More recently he built a number of large gliders including an impressive four metre Libelle.

Angus built some large and very well researched RC Scale models including a Percival Gull replica flown in a film commemorating Jean Batten's famous flight. More recently he restored another large model, his DH Gipsy Moth, that was given its first post-restoration flight before a group of friends and family at Karaka.

He has had a long association with the Auckland Model Aero Club, founded by his father, Fred Macdonald in 1928. Angus belonged from his childhood years making him more recently, a fitting patron for the Club. He had witnessed the early days of large petrol powered models and early rubber powered models flown in parks, particularly in the eastern suburbs. For a number of years Angus and I drove together to go to Auckland Model Aero Club meetings and other events. I really got to know Angus through this and as you can imagine, I was privileged to learn much from this master of aeromodelling.

Angus had a long list of achievements in Aero modelling, but he gave great service too. This was recognised in life memberships of Model Flying NZ and Auckland Model Aero Club and many other awards. He also recognised the achievements of others through the Macdonald Memorial Trophy. But above all he was a quiet gentleman of aero modelling, a friend and expert that we remember with affection and whom we will miss.

STAN MAUGER



Far Left: Hangar Rat competition at Balmoral Hall.

Left: Angus's Modelair Auster being wound for an Indoor scale event.

Lower: Angus with his new electric 8 Ball vintage contest model, at Karaka.



Above left to right: Angus with his electric Humming Bird, on the vintage field whilst timekeeping, and assembling the Gipsy Moth prior to flying it at Karaka.

Left: His Gipsy Moth taking off after a long restoration.

Karaka Diary - Charles Warren

4-10-20

This was not quite the calm day that had preceded it but alright initially and then breezy later. Brendon Neilson had another morning of making enjoyable flights with his SAM 56, the Geoff Northmore-designed model, that he has recently completed. All flights were from ROGs and he finds the model easy to keep within the space of the park. It is also a very stable model. My Ludd Bug Biplane, given to me by Geoff, was also flown. It required care to keep it controlled. Take offs need to be squarely into the wind as cross-winds can disturb it. It is also important not to let the nose pitch up or down too much. My Radian was also flown.

Don Spray had a number of rubber powered scale models. His Aeronca LA flew beautifully. He also flew his Stahl P-51D Mustang and Crosby Racer. His much-flown Piper Pacer has been converted to rubber power, from CO2 and was being trimmed on the day.

Later in the morning Ken Smith appeared with his electric conversion of the Slow Worm design. He had his hands full keeping it flying into the wind, necessary to stop it heading off downwind in the building breeze.



Above: Brendon's SAM 56, flying low and slow.



Upper: Charles with his Ludd Bug Biplane and Brendon with his SAM 56, during the morning's flying.

Lower: Chris Jackson in action with his Stobel F3K Discus Launch glider. This photo is from an earlier day at Karaka during September.



Top: Informal flying and social contact in the large stadium space.

Centre: Alex Fuller setting up his Hangar Rat.

Below right: Paul Squires assisting with scale judging. Bill McGarvey winding his Hangar Rat, beyond.

Below left: Alan Reed winding his Hangar Rat rubber motor separately.

Morrinsville Indoor Contest Day - Stan Mauger

Whilst attendance at this year's Morrinsville indoor free flight contest day held in October at the Westpac Stadium was slightly down on some years, it was an enjoyable day for both flyers and spectators. As CD I was caught between urging flyers to get official flights completed and also allowing enough time for the other side of the day, the opportunities for contact with others. This was a very 'sociable' day.

The well-established format of free flight events in the morning and scale free flight classes in the afternoon once again worked well. It certainly allowed concurrent time for static judging of scale models in the morning, ahead of scale contest flying later.

Hangar Rat was the best-supported free flight event. Bill McGarvey was getting flight times ahead of all others, allowing him a comfortable lead. Alan Reed had better times than the remaining group who were remarkably closely grouped, with his over three minute total times.

As the results show, both Hand-launched glider and Modelair Hornet failed to attract many entries. Hand Launched Glider was a contest between Graham Lovejoy and Alex Fuller, with Graham triumphing. Unlike previous years when the Modelair Hornet event had more supporters, this year Ricky Bould had the event to himself.

All scale events were lightly supported but at least provided enough flyers to award the full three places. All subjects in F4F Peanut scale were awarded similar static scores reflecting good building, however, flying scores were more variable. Ricky Bould's Ol' Ironsides was a reluctant flyer, while Graham Lovejoy's Lockheed Vega was great to watch and recorded a good time. Alan Reed had his Eastbourne Monoplane making lazy circuits of the hall.

In F4D Open Rubber Scale Graham Lovejoy's Stahlwerk was flying beautifully and added to a good static score, gave him the lead. Stan Mauger's much flown Fleet Canuck was in good enough trim to fly without any testing flights. Ricky Bould's Cessna Bird Dog needed more trimming. In Kit Scale, Ricky Bould was challenged with his usually reliable Veron Luscombe Sedan, whilst Graham Lovejoy's Megows Taylorcraft floatplane was once again a nice flyer. Stan Mauger entered his new Keil Kraft Cessna, built to replace the original indoor Cessna, a regular flyer. After some trimming it was flying well.

Despite all of the successes of others, special mention must be made of Anthony Hope-Cross's successful flight of his ambitious Indoor Peanut Scale project. Anthony had just completed his A.V. Roe Triplane. Initial attempts were just skimming flights from low hand launches, but with an increase in rubber motor size thanks to a rubber contribution from Ricky, several circuits of the hall, were achieved and greeted by cheers from all present.

No flying event like this runs well without a judging team to assist the CD. Special thanks is due to Nancy Reed and Bruce Heasley who kept timekeeping going during the day. Static judging for scale events by Martin Evans and Paul Squires was also greatly appreciated. Judges all assisted at short notice. Morrinsville continues to be an opportunity for enjoying flying in a double basketball court stadium with a high ceiling, but

importantly it has become a meeting place for indoor flyers and interested spectators from all over the North Island. If you have an interest in any of the classes flown, or would just like to enjoy being a spectator, put the provisional date of next year's contest in your diary. The 2021 contest is scheduled for Sunday October 10. This day is on the last weekend of the Term 3 school holidays.

Results

Hangar Rat

Total best 2 flights

1. W. McGarvey	5.49
2. A. Reed	3.52
3. R. Bould	3.38
4. S. Mauger	3.33
5. K. Smith	3.28
6. A. Fuller	3.19

Hand Launched Glider

Total best 2 flights

1. G. Lovejoy	0.43
2. A. Fuller	0.28

Modelair Hornet

(Target time 30 seconds)

1. R. Bould	31.6	33.0	31.10
-------------	------	------	-------

F4D Indoor Rubber Scale

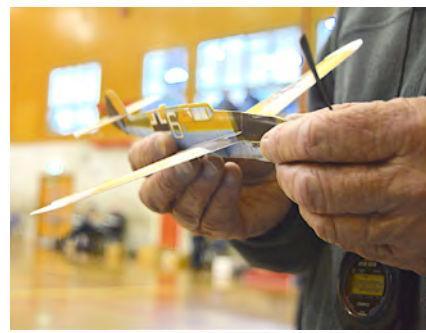
	Static	Flying	Total	
1. G. Lovejoy	773	463	1236	Stahlwerk III
2. S. Mauger	660	357	1017	Fleet Canuck
3. R. Bould	291.5	-	291.5	Comper Swift

F4F Peanut Scale

	Static	Flying	Ranking	
1. A. Reed	40	29	1/2	Eastbourne Monoplane
2. G. Lovejoy	36	54	1/3	Lockheed Vega
3. R. Bould	38	DNQ	3/2	Ol' Ironsides

Kit Scale

	Static	Flying	Total	
1. S. Mauger	55	41	96	Keil Kraft Cessna
2. G. Lovejoy	55	32	87	Megows Taylorcraft Floatplane
3. R. Bould	47	DNQ	111	Veron Luscombe Sedan



Clockwise from top left:
 Anthony Hope-Cross setting up his Peanut Scale A.V. Roe Triplane, Graham Lovejoy's Stahlwerk III for F4D Open Rubber Scale, Stan Mauger's new Keil Kraft Cessna for Kit Scale, a fun Czech foamy Me109 brought by Graham, his Shinden profile Cessna (from a MaxFax - D Shrull plan), Ricky Bould's Modelair Hornet and Graham's Megows Taylorcraft float plane.



Top: Martin Evans holding Ceinwen's model, Charles Warren and Ken Smith standing beyond.
Above: Martin Evans holding Ricky Bould's model whilst he attached the motor to the rear hook.

Cloud Tramp Challenge - Stan Mauger'

18-10-20

This year's Cloud Tramp Challenge had been deferred from earlier in the year but could now be run since Covid restrictions had been relaxed. It had to be called at short notice, because of the difficulty in finding suitable calm weather at this time of year. CD Ricky Bould certainly got it right. We had a day that started at almost dead calm at 7.30 am and was still flyable well into the morning. With eight of us putting in good flights, with many maxes achieved, we all had an enjoyable morning's flying.

Mike Mulholland had a well-trimmed model and was achieving excellent flight times early on in the day. Keith Trillo also had his model nicely trimmed out from last year and with the help of his son Dean was posting high times on the board. As Don Spray and Ricky Bould also had proven models from last year's event there were expectations that they would have little difficulty in posting maxes and they did.

It was good to see newcomers as well. Thanks to some help from Keith, Brian Howell's model was up with the best of them. Stan Mauger started the day with an entirely unknown model and was soon achieving good times. Brendon Neilson also joined in with a model that was soon trimmed and up to good flight times. Ceinwen Evans received some excellent tutelage from Martin, to gradually improve flying times.

Because of the level of flying activity, bystanders and other flyers were in high demand to hold models for winding and to time. Special thanks to all those who made themselves available to assist. It all helped to make the day a success.

There was also other activity as well. Ricky brought his SAM 35 but encountered motor train problems. Ken Smith on the other hand had some great flights from his David Ackery-designed Rubicon 5 P-30, now with a new pylon, and his electric Ferry 500. Both looked great against the blue morning sky. Brendon's RC SAM 56 was also flown to do his wings badge test under the watchful eye of Martin Evans.

Results

Entrant	Flight 1	Flight 2	Flight 3	Flight 4	Flight 5	*Points	Fly Off	Total
M. Mullholland	69	70	67	74	88	250	123	373
K. Trillo	144	131	68	87	66	250	123	373
B. Howell	79	71	116	71	80	250	107	357
D. Spray	53	54	69	104	80	250	--	250
R. Bould	74	90	83	44	50	244		244
S. Mauger	44	60	65	51	51	244		244
B. Neilson	40	47	48	54	57	235		335
C. Evans	42	34	39	46	49	210		210
P. Evans	29	15	--	--	--	44		44

*NOTE: Max flight time for each flight is 50 seconds.
Fly off only for those who attain 5 max times.



Above:
Dean Trillo assisting Brian Howell as he winds his Cloud Tramp motor, Keith Trillo looking on.

Right:
Don Spray receiving help from Brendon Neilson, to wind his motor.

Below:
Brian Howell's model climbing away nicely, Dean Trillo looking on (left).





Upper and centre right :

Ken Smith was getting great flights with his Ferry 500

Centre left:

Ken setting up his Rubicon 5 for flights within the park.

Above:

Ricky Bould had his long-time Flyline Heinkel 100 out for some testing after the contest.

Drury Indoor - Stan Mauger

28-9-20

Despite the smaller group than on some evenings, there was a constant stream of models being tested on this practice night and it was seen as a good opportunity to check out models for the Morrinsville Day. Some good flight times were achieved with Hangar Rat models. Bill McGarvey and Ken Smith were both making over two minute flights with their Hangar Rats. Stan Mauger had his Hangar Rat there for testing and had a promising flight on modest turns. Brian Howell's model was soon trimmed with help from Ricky Bould and Bill McGarvey, leaving Brian with a look of absolute delight. Tony Woodroffe was on hand to assist and his experience with full-size aircraft design was of interest to those of us trying to decide on the best options re trimming questions.

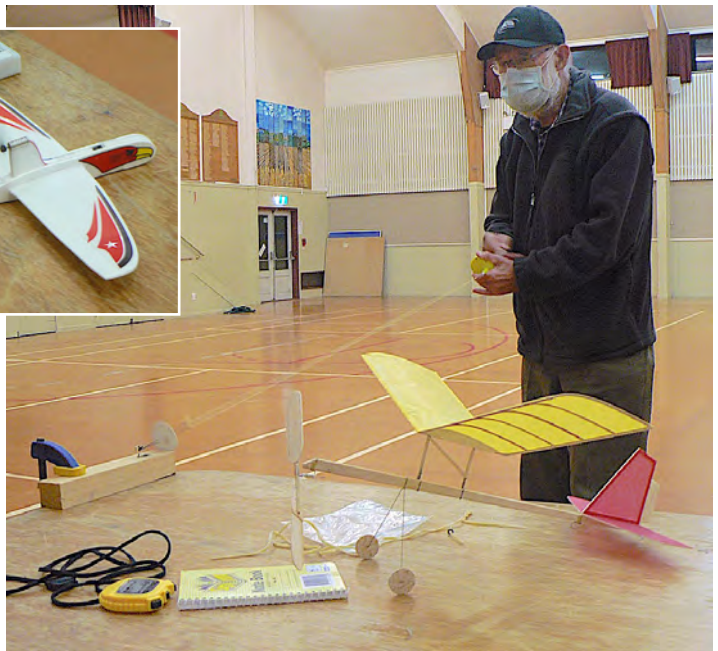
Ricky had set himself the task of getting two new Peanut Scale models trimmed. They were a Miles Sparrowhawk and Renard R17. Both were built as part of the Hip pocket Mooney Cook-up and were on their first outing. Whilst only short hops were managed, it was possible to assess necessary trim changes with only minor repairs needed. That achieved, it was on to setting up his Ol' Ironsides, a Nutz design. The flights got better and better as larger motors were tried and nose weight removed, with a nice final flight before the end of the evening. In any gaps between various free flight flights Mishka Soroka was enjoying flying his twin motor VTOL RC foamy.

It was a distinctly 'different' evening, with flyers wearing masks to comply with Covid-19 Level 2 requirements.



Above: Ken Smith's electric glider also provided fun for Mishka Soroka.

Right: Ken Smith winding his Hangar Rat.





Above: Ricky Bould's Peanut Scale Ol' Ironsides being wound Tony Woodroffe seen beyond.

Inset: Ricky's Reynard R17, also Peanut scale, brought for testing.

Left: Bill McGarvey was achieving good times with his Hangar Rat.

19-10-20

Down for Hangar Rat, this night saw a good number of flyers recording times. Bill McGarvey, fresh back from his success at Morrinsville, once again put in the best times. It was great to see everyone who put times on the board, recording two times over a minute. John Swales arrived well into the evening and with just the necessary two flights, came in not too far behind Bill. This was not the easiest of nights in the hall, however. Midway during the evening, the alarms came on causing a fast exit of the hall until the fault could be found. Then just before we were leaving it happened again. Thank you to Brian Howell with John Swales assisting for sorting out the problem.

Keith Trillo brought a trio of Oculus inspired designs to test and soon had them flying well from initial trimming, much to the delight of all present.

Hangar Rat results

1. B. McGarvey	1:55	0:53	1:52	2:15
2. J. Swales	1:47	1:54		
3. S. Mauger	0:59	1:41	1:38	1:41
4. R. Bould	1:22	1.06	1:26	
5. K. Smith	1:22	1:09		

Total best two flights

4:10
3:41
3:22
2:48
1:31



Above: Keith Trillo brought a series of balsa models based on the APS Oculus design, to test supercapacitors in these models.

Right: John Swales's model achieved some good times in Hangar Rat.



Hoteo Diary- Ricky Bould

4-10--20

The drive with Paul Eans, to Hoteo looked promising with misty conditions that improved as we got nearer the field. The conditions were decidedly hard underfoot, but the grass was long and wet. Definitely gumboot ground conditions. There was no wind most of the time and what there was came from the north as forecast. We moved to the lower and flatter ground away from the normal field we use.

Paul flew a Longster powered by a Red Fin .55 cc diesel. Once he had settled the trim there were number of flights that showed a good sit in the air and stable flight. One or two of the flights were of considerable length and were very high when the engine cut, but the low drift meant they landed close by for easy retrieval.

Paul also had his aerobatic Ebenezer Fury flying, to provide some light entertainment and did not disappoint. The PAW 55 was running well and the flights became less dramatic once the power trim had been adjusted.

Ricky had a better day this time. The two E20 models he had with him, a Ferry 500 and a SAM are now trimmed, by starting with check hand glides followed by short motor runs increasing to a full timed run. The final run of the Ferry 500 resulted in the model drifting into a field that had a ditch between the landing area and where we were flying so retrieval was delayed until we left.

Next out was the Veron Aeronca C3 that is powered by a Brown MJ140 CO2 motor. This model had been weighed before leaving and at 103 gm is on the porky side but still flies well. A larger propeller was tried and there seems to be some potential duration to be found. It really needs a lighter fuselage with less sheet in it.

Stan arrived a little later than we did and did not have the best of days as the engines in the Austerboxy and the Piper Tri-Pacer were proving difficult to start after a long period without use.

We flew until about 1130 hrs and had a day with no repairs required.



Left:
Paul Evans soon sorted out the trim of his Henderson Longster and it made some great flights.

Modelair Hornet - A great indoor flier

Although Modelair Hornet is an established indoor class, I am once again running this article in the hope that we may increase the number of flyers supporting it as we launch the Club's annual competition to commemorate Angus Macdonald, which will be for Modelair Hornets. I am reprinting an abridged version this article from Propellor's (Fred Macdonald's) column in the February 1938 issue of the Auckland Star which was then published again in Slipstream April 1991 and more recently in May 2016 – Ed.

Here is a little model that will win contests if made according to the instructions. Here are the instructions. The plan is smaller than full size and should be enlarged to bring the wing to 7" long, making a total wingspan of 14".

Construction

Trace the wing and fuselage directly from the plan. Then cement the strengthening pieces of 1/16" balsa in the position shown, on each side of the fuselage at the nose and tail. Now make the central motor cut-out 3/8" wide as shown on the printed [ply] veneer. Do this after the nose and tail strengthening pieces have set firmly in place and this will avoid splitting the wood when making the cut-out. Bend the rear rubber hook to the shape shown and cement firmly in the position shown.

Take 12" of the piece of 22 swg wire and bend it shape and dimensions shown in the sketch. Now fit it on to the fuselage and cement it firmly in place. Bend the axles and fix in the 3/4" diameter wheels by bending up the surplus wire at the ends. Use a pair of fine-nosed pliers for all of the wire-bending operations.

Cut the elevator and rudder to the shapes shown. Cement the elevator on to the fuselage and make sure that it fits squarely. When the elevator has set in position cement the rudder to it, and make sure that it is not offset to left or right (the model may be made to circle by gently warping the rudder when the model is ready for flight).

The wings are now made on the pattern given on the plan. Make the two halves exactly the same. Notice when cutting out the wing the slight curve on the root end so that the two halves will make a flush joint when the dihedral angle is set into the wing. Now cut a slight bevel on the top edge of each rib. Cut out the two wing root ribs to exactly the shape indicated.

Now take the two ribs and pin a piece of the 1/8" sheet remaining from the centre cut-out in the fuselage between them. This will ensure that the ribs are the correct distance apart and also parallel. Make sure that the bevels still slope inwards. Place the two ribs on a flat board and cement the wing halves to the ribs, holding them in place with pins. The tips of the wings should be raised 1 3/4" above the centre of the wing, that is, 2" above the board allowing for the fact that the ribs project for 1/4" below the leading and trailing edges of the wing. The tips may be raised by books, boxes or similar objects to give the correct dihedral angle.

Cement the join of the wing halves, which should be as neat as possible, firmly. Allow plenty of time for these joints to dry and check while drying for any wing warps, which may be taken out by twisting the affected parts. When perfectly dry remove the holding pins



and the piece of 1/8" strip put between the ribs for spacing. Cement the two wing tip ribs in place. Carve the propellor to the shape shown. Then finish and balance it as in the diagram provided. Now take a long pin or needle and push it through the nose in the position indicated by the dotted line of the propellor spindle. Now cement the aluminium nose bearing piece firmly in place, after having bent it to the shape of the nose. See that the hole made in the aluminium and hole already made in the nose coincide. When this is dry, push the spindle through from the motor cut-out side of the nose, slip two collets on (round the face to round face), and slip on the propellor. Bend the wire as indicated and push back into the propellor. Put a coat of cement around the centre of the propellor to strengthen it. Also, a little cement at the back of the spindle will make a good bearing and strengthen that part of the nose.

Flying

The rubber motor should be left about 2" over the length between the hooks, and for best results should be lubricated with rubber lubricant. Give the motor a few turns and launch the model gently. Should it dive, move the wing forward a little until this is overcome and vice versa. The wing should be held in place with a light rubber band. With care in building and flight adjustments this little profile model is capable of good performance and for a model of its size it has an excellent glide.

Postscript

Angus Macdonald recommended that a soft block of 6 1/2" x 3/4" x 1/2" be used for carving the prop. His Hornets were flown on a single loop of 1/8" rubber and he had excellent results with this power.

Calendar **November-December**

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 ziply@xtra.co.nz

AKA AKA

Saturdays & Sundays

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

Aka Aka Steward

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

(For Club points)

Drury

Drury School Hall

Monday November **16**

Kit Scale and Modelair Hornet (7.30 - 10pm)

Monday December **14**

Practice night for the Nationals (7.30 - 10pm)

Indoor Steward

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

Calendar **Looking Ahead**

2021

NZ Nationals

January 3 - 8th

New Zealand Nationals, Carterton
Full details - www.modelflyingnz.org

2021

MORRINSVILLE

Sunday October 10

(10am to 4pm)

(Provisional date to be confirmed)

Indoor Free Flight classes

Hangar Rat, Hand Launched Glider, Modelair Hornet

Indoor Free Flight Scale classes

Open Rubber Scale, Peanut Scale and Kit Scale

OFFICERS OF AUCKLAND MODEL AERO CLUB INC.

Patron	Vacant		
President	Ricky Bould	478 8949	unimec1994@gmail.com,
Secretary	Mike Fairgray	636 8439	amacsecretary@outlook.com
Treasurer	Mike Fairgray	636 8439	amacsecretary@outlook.com
Recording Officer	Keith Trillo	298 4161	careith@hotmail.com
Bulletin Editor	Stan Mauger	575 7971	stanm09c4@gmail.com
Committee	Paul Evans	479 6378	ziply@xtra.co.nz
	Brendon Neilson	09 239 3204	2neilson@gmail.com,
	Charles Warren	09 238 9430	cpwarren@ps.gen.nz

Club subscriptions

NZMAA Affiliation is mandatory for Club flying

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

Junior \$10 (+\$30 NZMAA) **Social** \$40

Intending members with current NZMAA affiliation pay only the AMAC sub

Please make payments to

The Treasurer Auckland Model Aero Club

Mike Fairgray,

3 Kanohi Tce Mangere Bridge 2022, Auckland

NEXT CLUB MEETING AND NATTER NIGHT

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

November 2: Electric power for model aircraft.

December 7: Unorthodox model aircraft.

**Your other current projects, models, plans, engines and
photographs etc are also welcomed for the table**

Trading table:

Buy, swap and sell

Visitors or intending members welcome