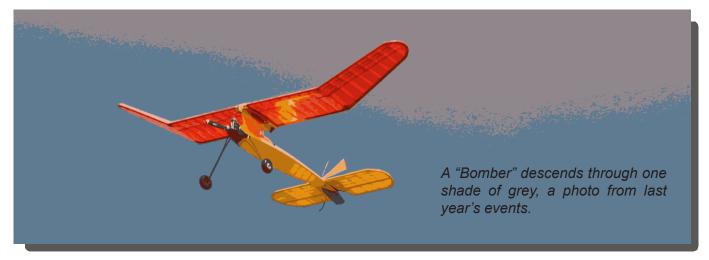
# Official Journal of the WA Model Aero Club (inc) and SAM 270 Western Australia

Issue: 41, April 2015





## From the President.

ard to believe another month has passed, there has been very little action down at the field with no events run since the Burford and Standard Duration. There are a few events scheduled for this month starting with the state FF scramble and hand launched glider events being held at the Mitchell field in Oakford, the same place as last year. These two events are always a lot of fun and a great introduction to FF flying, with the scramble event you just have to keep it in the air as long and as many times as you can in the 1 hour allotted time frame. The hurl glider will also be run in conjunction with catapult launch and discuss launch gliders and all three will compete against each other.

I spent some time at the field on Sunday afternoon dragging some steel mesh with a heavy steel pipe on it to try to level the area we use and I'm pleased to report that it worked pretty well, all the wheel ruts and hollows are now gone. We just need some rain to assist the grass to cover the sand areas and we are back in business. Thanks to Graeme Cook for the donation of the four pieces of mesh. I purchased the necessary steel cable and fittings to enable us to tow it behind the four wheel drive and after about four laps the area is pretty flat. Thanks also to Gary and Angela for coming down to assist me.

There has been a request that the glider event scheduled for this month be postponed as two of our flyers are not able to attend on the day. I will look at the calendar and try to reschedule this for a better date so all can participate. This is still a trial event so we want to give it the best shot of becoming a state event in the future.

Dicko

# **WAMAC** Minutes of general meeting held on: 13th March 2015

Held at: 20 Granville Way, Willetton

Meeting started at: 8pm with the president lan Dixon in the chair.

Members present: I.Dixon, P.Baartz, M.Butcher, B.Slyns-Daniels, G.McLure, A.Bentley, R.Rowson, G.Cooke

Apologies: R.Bovell, K.Hooper, T.Latto, A.Trott

### **Visitors:**

Correspondence inwards: DT 192 and other newsletters

Correspondence outwards: Geezer to mailing list

Treasurer's report: Balance at bank: \$16,020.94 21 members including 1 junior, 9 associates Moved report be received P.Baartz, seconded I.Dixon and carried.

Minutes of previous meeting: were confirmed as circulated to members. Moved M.Butcher, seconded R.Rowson and carried.

### **Business arising:**

General Business: Dates for Dandaragan weekend confirmed by Kevin Hooper, he has booked venues for the events to be held. Dates are 15th and 16th August.

Discussion regarding maintenance of flying field, resolved that Graeme Cooke and lan Dixon would organize between them for the necessary equipment.

#### **Competition results:**

SAM270 Standard Duration: 1. T.Latto 2.R.McDonald, 3. I.Dixon 4. P.Baartz

SAM270 Burford Duration: 1. I.Dixon, 2. R.McDonald, 3. K.Hooper, 4. R.Silbereisen

Meeting Closed at: 8.33pm

# Solved! The perfect hand launch.



The author carries out a "Mayo" launch! Travelling at some 20 m.p.h. (the engine having been started up beforehand), the plane rises gracefully from the hands supporting it. This method of haunch may be used when the ground is too rough for take-off, or in gusty weather when advantage is secured by the plane being some feel

ound in my copy of the 1943 publication - "The Design and Construction of Flying Model Aircraft" this illustration depicts a novel method of hand launching a large model. Somehow it may meet with more than air resistance today. (*Ed.*)

# Dorothy Buckley Trophy Update

The Dorothy Buckley trophy is presented each year by Aeromodellers W.A to the top point-scorer in State Championship events held during that calendar year.

The score is calculated from all disciplines and classes within the spectrum of AWA state events.

1947 was the first year that the trophy was presented and won in that year as well as the following two years by R.E.Fisher, since 2006 members of WAMAC have been prominent winners of the trophy, in particular lan Dixon and Rod McDonald.

There is an air of mystery surrounding Dorothy Buckley herself and as to why she organised a trophy for aeromodelling. There was a rumour which may or may not be baseless that Dorothy had a son who was involved in aeromodelling and joined the RAAF during the war years, sadly not to return home from duty.

In 1947 when the trophy was first presented the main disciplines were Free-flight and a few control line events as this discipline was in it's infancy.

The attached article was written by Alex Cunningham, who along with such fellow modellers as Len Armour, Theo Merrifield and Dick Gibbs entered the first competition for the Dorothy Buckley trophy.

The article on the right of this page was published in 'Windsock' around twenty years ago.

(Thanks to Paul Baartz for providing these two articles.)

# The Dorothy Buckley Trophy

Pegasus the winged horse, begotten of Poseidon and sprung from the body of Medusa when Perseus struck off her head. With a stroke of his hoof he broke open the spring of Hippocrene on Mt Helicon, and mounted on him Beelerophon slew the Chimera; thereafter he ascended to heaven, and became a constellation in the sky.

Of course we knew all of this from our Greek studies did we not? It would be easy to say that the above was the design idea for the Dorothy Buckley Trophy and those wishing to believe this are invited to continue to do so. Little is known by me of Mrs Buckley and her wish to have the trophy made. I can but narrate the following.

Stewart Dawson (London) Ltd was considered to be one of Perth's leading jewellery stores. It was located on the corner of Hay and Barrack Street (west side) and was bounded on one side by Royal Arcade and on the other by a milk bar whilst underneath was the Alhambra Bars. My situation as a 16 year old lad was to try to learn the retail jewellery trade and at the same time run errands, sweep floors, and clean windows

One day the boss, an owner-partner, informed me that a lady wished to have a trophy made to be presented to the winner of a model aeroplane competition and as I "made those sort of things", would I try and think of a design! Struth, here I was a 16 year old who did not know silt from clay about anything being asked to come up with an idea for a trophy worth a fortune in those days. I told him that I had an "Aeromodeller" at home with Pegasus the winged horse on the cover and this might be of some use. He looked blank and I was told to jump on the shop bike and go and get it and give it to Des Cavanagh. Des was a manufacturing jeweller who had a workshop upstairs in Royal Arcade and was an old bloke of at least 25 years! Des firstly made Pegasus up in pink wax before casting it in silver. A half wing was made up in brass and then chromed, and a wooden mounting like a wing tip tank was fitted onto which the horse was attached.

On completion the trophy looked absolutely magnificent. I was told that Mrs Buckley was more than pleased with what we had come up with. Today, the Dorothy Buckley Trophy is looking rather worn but, 50 years on, so am I.

Theo Merrifield told me he was there when the first competition was flown, and he's old too you know! Lennie Armour and I both flew that day, but of course that's another story. Alex J Cunningham

(Ex WA 2)

Sad footnote: both Len Armour and Theo Merrifield are now deceased

# "De-construction" Page - what we are building.



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CESIGNED BY: H, R. THOMAS

RIGHTHEO IN, MAY 1941

RIR TRAILS

DONN'N FORME BY: SA POSTERS

The two models on the left were recently constructed by Graeme Cooke

F/F "Binatang 30" with RedFin Millish 0.75 upfront, built from Dave Brown short kit and scrap box over last 2 weekends.

Recycled Orange Box glider, Graeme had the wings sitting in his shed for over 25 years before recovering the wings, procuring a plan and building the new fuselage and tailplane late last year.

Another two under construction are the models below. A "Buzzard Bombshell" is nearly complete. The "Challenger" aka "Tiger" is a 1941 design and is slowly taking shape.

Both models by Michael Butcher.





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# facebook

The SAM270 Facebook page is up and running. Just click the logo above and hit "Like" when the page comes up so you can see all the action around the club



## Paul Baartz Shield 2015

SAM number	Name	Club Points
2706	R McDonald	6
27017	I Dixon	6
2704	T Latto	5
27021	K Hooper	3
2703	R Rowson	2
2701	P Baartz	1
27028	R Silbereisen	1
2702	P Spencer	0
27010	G Eyres	0
27011	R Hoogenkamp	0
27012	G Dickens	0
27013	A Trott	0
27014	H Van Leeuwen	0
27015	G Cook	0
27016	J Voak	0
27019	R Bovell	0
27020	C Behr	0
27022	R Sherburn	0
27023	G McLure	0
27024	R Sutherland	0
27025	L Isitt	0
27026	B Slyns-Daniels	0
27027	M Butcher	0
27029	C Edwards	0
27031	G Car	0
27033	B Edwards	0
27036	E Mitchell	0





THIS NEW AUSTRALIAN engine is obviously designed as a sports motor with the emphasis on easy starting and consistent performance. On test it proved particularly easy to handle and running on undoped fuel ran just as steadily at 16,000 r.p.m. plus, with propeller loads as at 45,000 r.p.m., although with the higher speeds the settings became increasingly more critical. Its flexibility was outstanding. Hand starting was still easy with a 5 in. diameter propeller whilst, at the other end of the scale, a steady 4,600 r.p.m. was achieved with a 12 x 4 Trucut Maximum torque appears to be developed at 7,000 r.p.m. and there was very little fall off in torque with lower speeds down to the limit tested (4,000 r.p.m.).

About the only feature that could be criticised on this particular engine was the rather tight fit of the contra piston which made adjustment difficult after the engine had warmed up, although the contra never actually "froze". General handling, however, was excellent, the controls being non-critical and, with little overlap, a prime was readily induced by finger choking and turning the propeller over without any blow-back down the fuel line (a very desirable feature on a sports engine).

For starting with the smaller propellers, finger choking followed by a prime through the exhaust ports produced the quickest starting, the needle valve also having to be opened up from the normal running setting to give a fairly rich mixture. We did not like the thimble-type needle valve screw, but that is mainly a matter of personal preference. A thimble is not so easy to grasp, nor is it easy to see when a particular setting has been established. But the friction lock (split thimble) was quite adequate

to prevent the setting from wandering.

Power output is what would now be termed moderate for a modern 1.5 c.c. diesel, reaching a peak figure of .11 B.H.P. at 12,000 r.p.m. Possibly a slight improvement would be realised with a nitrated fuel and certainly more power could be extracted from the design, if required, by reworking the transfer ports and passages. The four ports only just open, so the effective transfer is somewhat restricted and if performance were increased by opening the transfer flow, quite likely some of the easy handling characteristics of the engine would be lost.

The manufacturers recommend a 9 by 4 propeller for running in (which on our check gives an r.p.m. figure of around 8,000); and 8 x 4 or 7 x 5 for free flight; and a 7 x 6 (or control line work. These would appear just about the right sizes for operating r.p.m. in the air consistent with peak power. But for sports performance we would be tempted to take advantage of the low speed characteristics of this engine and try something like a 9 x 4 or even 10 x 4 for free flight, making the engine ideal for R/C work.

- A series of fuel consumption tests were run with the

Well made Australian diesel with good performance rating for sport or contest flying-Reviewed by R. H. Warring

Taipan over a range of 9,000 to 16,000 r.p.m. At low speeds a fairly rich needle valve setting is required for smooth running whilst at the upper end there is a marked difference between maximum lean mixture setting and the amount the needle valve can be operated before there is any appreciable loss in r.p.m. The curve given repre-sents an arbitrary "optimum lean" setting of the needle valve, individual checking points also being indicated. At the r.p.m. for peak power output, fuel consumption with standard fuel was 1 c.c. per 12.5 secs, or 4.8 c.c. per

minute, equivalent to 2.6 litres per B.H.P./hour. Constructionally the Taipan is quite conventional. The cylinder unit is very similar to the Frog 150, but employing four transfer passages cut on the outside of the lower cylinder, terminating in holes bored at an angle upwards through the cylinder walls. These ports overlap the exhaust but, as mentioned previously, offer restricted transfer with the piston at the bottom of the stroke. Four exhaust ports are milled in the flange giving stroke. Four exhaust ports are milled in the flange giving approximately 180 degrees effective circumferential opening coming between the transfer ports. Exhaust opening is fairly late, although the ports themselves are of generous depth, resulting in sub-piston induction of about one-third the depth of the port. The hardened steel cylinder has the bore internally ground and finished by lightly honing, following typical European practice; external cylinder threads are \$\frac{1}{2}\$ in, diameter at the ton external cylinder threads are 1 in. diameter at the top and 2 in. at the bottom (screwing into the crankcase casting), a fibre gasket provides a seal with the case.

Piston and contra are mechanite with shallow conical matching surfaces finished by grinding and carrying a 9/64 in. diameter press fitted silver steel gudgeon pin. The connecting rod is turned from dural and is of

generous proportions.

The crankshaft is extremely massive for a 1.5 c.c. engine, being 11/32 in. diameter stepping down to a 3/16 in. diameter front section tapped with an A.F.N. The shaft is splined to take the driver and the abrupt change of section here would appear to produce a stress raiser so that a shaft could break immediately in front of the main bearing in a bad crash. The shaft is finished by grinding, but the 3/16 in, diameter crank pin is not ground, which is a little unusual.

A plain main bearing is formed by reaming the crankcase casting and then very lightly honing. The fit was generally excellent and the bearing ran cool at all The crankcase casting itself is a nice clean job with fillets supporting the bearing length, short choke tube angled forward and nicely proportioned mounting

The brass spraybar blocks off more than half the throat area of the intake tube, but this has no adverse effect and helps venturi effect. Its needle appears to be

### AGOO MOOGUUSD

#### DATA

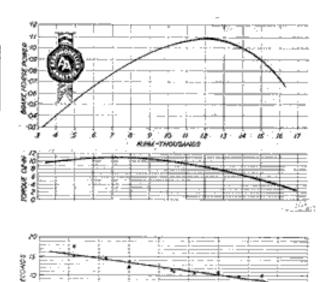
SPECIFICATION				
Displacement: 1-5 c.e. (-091 cu. in.)				
Bore: 511 in.				
Stroke: -453 in. Bore, stroke ratio: 1-16.				
Bare weight: 3-3/16 ounces				
Max. B.H.P.: -11 at 12,200 r.p.m.				
Max. torque: 11-2 ounces-inches at 7,500 r.p.m.				
Power rating: -074 B.H.P. per c.c.				
Power weight ratio: -0345 B.H.P. (e.c.				
Material Specification:				
Cylinder: Case hardened mild steel				
Piston: Mechanite				
Contra piston: Mechanite				
Con. tod.: Dural				
Cylinder jacket: Dural (anodised red)				
Crankcase: Light alloy die casting L.33 Crankshaft: 3 per cem. Nickel steel.				
hardened				
Back cover: Daral (turned)				
Bearing: Plain (seamed and honed)				
Spraybar and thimble: Bruss				
Prop driver and front wather: Dural				
Manufacturers: Gordon Burford & Co.				
91 Beach Street, Grunge, S. Australia. Price: £3.19.6 (Aust.)				

PROPELER—R.P.M. DATA				
Propeller dia. x pitch	t.p.m.			
12 x 4 (Trucut)	4,600			
11 x 4 (Trucus)	5,400			
IC x 4 (Trucut)	5,700			
9 x 4 (Trucut)	8,000			
	10,200			
8 x 3 (Trucut)	10,750			
7 x 6 (Trucus)	9,200			
7 x 5 (Trucum	10,000			
I h 4 Ultracted)	12,200			
7 x 3 (Trucut)	14,000			
6 x 4 (Trucut) 6 x 3 (Trucut) 3 x 3 (Trucut) 7 x 4 (Frog nylon) 6 x 4 (Frog nylon)	13,200			
6 X 3 4 F (UCUI)	14,500			
7 x 3 (Fraction)	16,000			
6 x 4 (Frog nylon)	15,500			
9 x 3 (Tiger)	9,000			
8 x 34 (Tiger)	11,400			
6 x 9 (Tiger)	11,000			
Fuel used: Standard diesel mixture (1:1:1)				

adapted from a standard darning needle-which is probably just about as good a fine needle as one can find.

Workmanship throughout is good and, in fact, the factory producing the Taipan appears to be well equipped with machine tools and knows how to use them. Packaging follows the modern trend in display, employing a vacuum formed transparent acetate moulding to encase the engine on a card backing—operating instructions for the engine being printed on the back of the card. Not, perhaps, as much "literature" as one normally gets with a new engine—but this one should be sufficiently foolproof to get by with a minimum of instructional

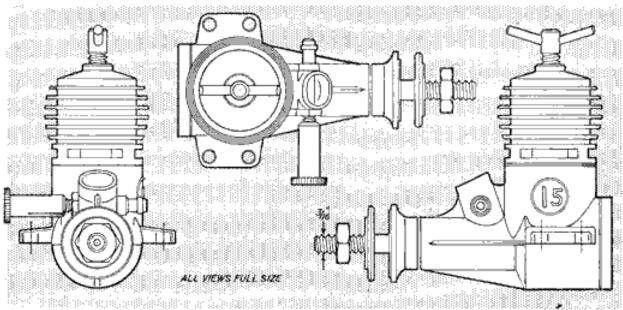
Fuel recommended by the manufacturers is equal parts ether, paraffin, and castor oil, on which mixture the engine handles admirably. A small addition of dope (up to 2 per cent, nitrate) gives a certain benefit and a 4 per cent, additive makes for easier control settings at speeds of 14,000 r.p.m. and over. This order of speed, however, is beyond the peak of the engine, so a standard diesel mixture is entirely adequate. A.P.S. power coding is E.



Curve above is for fuel consumption, showing time against revolutions per minute with plats and mean curve. Below, parts of the Taipan, named after a dangerous Austrolian snahe

ALANA - PANDUSANO S





# **Contest Calendar for 2015**

Date	Event	Location	Start CD
March 1st	Combined Open	Meckering	9.00am
March 8th	Standard Duration	Oakford	9.00pm
	Burford Duration	Oakford	11.00am
March 15th	WAFFS Free Flight Cup	Meckering	9.00 am
March 22nd	Maelstrom Mass Launch		
	Ebenezer Mass Launch	TBA	9.00am
March 29th	Open Rubber State Championships	Meckering	9.00 am
	SLOP State Championships		
April 12th	HLG/CLG State Championships		
	Power Scramble State	TBA	9.00 am
	Championships		
April 19th	Nostalgia	Oakford	9.00 am
	Vintage Glider	Oakford	11.00am
April 26th	1/2A Texaco	Oakford	9.00 am
May 3rd	P30 State Champs / F1G Cup	Meckering	9.00 am
	Combined Open / Free Flight Cup		
May 24th	OT Duration	Oakford	9.00 am
	2cc Duration Trial event	Oakford	11.00am
30th May- 1st June	F1A, F1B and F1C State	Meckering	9.00 am
	Championships (TT)		
June 7th	1/2A Electric	Oakford	9.00 am
	OT Texaco	Oakford	11.00am
June 14th	'38 Antique	Oakford	9.00 am
28th June	Escargot Trophy	Meckering	9.00 am
	WAMAC Cup		
	Combined Open / Free Flight Cup		
5th July	Open Power State Championships	Meckering	9.00 am
	F1B Crowley Cup		
	Combined Open / Free Flight Cup		
July 12th	Nostalgia (State)	Oakford	9.00 am
19th July	Fuller, Nostalgia and F1Q	Meckering	9.00 am
	Combined Open / Free Flight Cup		
July 26th	Burford (State)	Oakford	9.00 am
August 15th – 16th	FIA Team trials F1A,	Meckering	9.00 am
	F1B and F1C(TT)		
	Combined Open / Free Flight Cup		
August 22nd -23rd	Possible weekend away	Dandaragan	
September 13th	OT Duration (State)	Oakford	9.00am
September 20th	OT Standard Duration (State)	Oakford	9.00am
October 4th	1/2A Electric (State)	Oakford	9.00am
October 25th	Texaco (State)	Oakford	9.00am
November 8rd	1/2A Texaco (State)	Oakford	9.00am
November 22th	'38 Antique (State)	Oakford	9.00am
November 29th	Tomboy Rally	Oakford	9.00am



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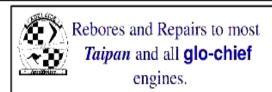


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