

VICSCALE



The Bi-Monthly Newsletter of the Victorian Flying Scale Aircraft Association.

Visit our website at <http://www.users.bigpond.net.au/vfsaa>

Sportscale and Rally at Albury.

Inside this issue:

This was our fifth year for this event at Twin Cities and the first one to be marred by a poor weather forecast. This seemed to put many people off the trip north and with only six VFSAA members attending from Melbourne it was disappointing to say the least. The Ballarat scale modellers are made of sterner stuff and we welcomed their four flyers who attended.

and we still managed to get a round of Scale and a round of ARF in between the rain patches which varied from light to torrential. The wind stayed straight down the strip and sixteen flights in those conditions was a good effort. Despite wet feet from negotiating the rivers and lakes everyone pressed through to the finish with no losses of aircraft.

As is often the case the weather, while not at all good, did not put us out of business entirely

Dinner on Saturday night was arranged by David Balfour at a local pub and was a very sociable evening with all groups attending.

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Our get together on Saturday night at the Newmarket Hotel was well attended.

Special Dates and Points of Interest-

Vicscale General Meeting at FNCV
Thurs. 1st October

Ballarat ARF Scale Day
Sunday 25th October

Minutes of the August General Meeting.

Date: 6-8-09

Start: 8.00pm

Location: FNCV

Attendance: 24

Apologies: David Anderson, Barrie Reaby, Joe Finnochiaro, Peter Bailey, Mark Collins, Bill Eunson.

Previous minutes: read

Matters arising: nil

Correspondence in:

- E-mail from Noel Whitehead re his advice to the MAAA regarding the Team Trials for the next World Champs to be run with the Nats.
- VMAA minutes
- E-mail from the FNCV re changes to collecting the key.
- Invitation from the VMAA to sponsor an event at the Nats.

Correspondence out:

- E-mail advice to the VMAA re the State Champs results.
- Thank you to the VRF and a request for Queens birthday 2010, also a query as to the use of the field for the State Champs next year.

Treasurer's report: read

General business:

- CD suggested changes to the Scale Rally events, owing to the lack of entries in the non-flying category. Civil and Military in together, and trophy's for 1st, 2nd and 3rd place.

Meeting closed: 8.20pm



Vic Larsen's Nieuport 28



All the way from the USA come these pictures of my mate Vic Larsen and his new Nieuport 28. Vic has just finished and test flown his aircraft in Texas.

Model is 1/4 scale at 80" wingspan, from a Balsa USA kit, and is powered by a OS 160 Gemini twin.



Vic reports that it flies like a pussy cat and he is now putting the finishing touches to the model by adding more detailed bits.

President's Report

No report this issue.



I received a slide show a short time back which covered some of the life of this remarkable woman. Looking for more information I found the website from which the slide show was prepared and next issue I'll include details and photos of her travels in a Zeppelin and in the twelve engined Dornier flying boat.

From the Editors.

We had a rare miss at the event at PARCS due to another commitment and the event at State Field was a failure from lack of entries so we don't have reports for the newsletter for these occasions, which brings me to make another plea for greater attendance by our members at our scheduled events.

I realise that not all events can be attended by all members but of our current 62 members we seldom find more than six or seven at rallies and even less at competitions.

What is needed to get more of you out and flying?

There is a noticeable reluctance by members to attend meetings that fall outside their usual flying space and many still don't show up even when we are in their area. This lack of interest becomes even more obvious when we travel to a country venue.

If you feel that you want something different to our present format of events then why not make your thoughts known and speak up at meetings. Your committee is elected to serve the members' needs and most of its time is spent trying to provide opportunities for members to meet and fly together. We regularly have 25-30 at our bi-monthly meetings and there is obviously interest in the Association but attending meetings is only a part of being a member, with building and flying still the area of greater importance. After all, that is the stated primary purpose of the Association and presumably the reason behind its formation.

I know that I'm getting old and arguably a bit less tolerant but if we don't start moving forward as a group then the Association will stagnate and eventually die.

Then you won't have any meetings to go to!!!

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Sportscale and Rally at Albury.

Sunday was a better day and, although the wind was rather cold, the rain stayed clear and we enjoyed a quite busy morning of flying until 1:30 pm when CD Keith Schneider presented the awards and we packed away our models for the return trip to our respective home towns.

We had a few new models this year with David Balfour's Fairchild, Neville Glew with a large Spitfire and Ken Osborne brought his collection of unusual aircraft which this year included a quarter scale model of Ray Stits' "World's Smallest" aeroplane. Graham Frauenfelder flew his 1/3 scale Cub and Noel Findlay assembled his new Bristol "Bulldog" intending to fly. Unfortunately the wind caught the "Bulldog" while taxiing and it was overturned, causing some minor damage which was enough to prevent any further attempt. Glenn White was fortunate to realise that he had damaged one elevator of his big Cessna just prior to flying, thus avoiding what might have been an "interesting" flight. Gary Sunderland flew his Albatros on Saturday and brought out his rebuilt Fokker D.VII on Sunday. The motor in the Fokker refused to perform so Gary, always keen to fly, packed it away and assembled the Albatros again. Like most of us he hasn't had much flying in the recent poor weather and wanted to make the most of this opportunity.

The Twin Cities field was a picture with the widened and lengthened strip and well cut grass surrounds, the new steel roof over the pits being a fortuitous addition given the rain on Saturday. Everywhere was green grass which made a welcome change from our dry city fields and the rain we had should make a bit of a difference to the Hume Weir.

Without doubt this field must become the permanent home of our National Championships and State and National executives should be encouraged to provide the necessary assistance and finance to the Twin Cities club to enable this to take place. The recent debacle in NSW and the poor attendance at WA Nationals clearly demonstrates the need to seriously consider the establishment of a permanent location central to the mainstream of scale modelling.

Our trip home was broken as usual for scones and coffee at Glenrowan and we arrived back in Melbourne with just a little daylight remaining.

It was another good weekend and you should have been there!

SPORTSCALE RESULTS

CONTESTANT	MODEL	RND 1	
NOEL FINDLAY	GYPSY MOTH	2408	1
DAVID BALFOUR	CURTIS ROBIN	2293	2
JOHN LAMONT	SPACEWALKER	2180	3
GARY SUNDERLAND	ALBATROS	2071	4
ROGER CARRIGG	AIRACOBRA	2027	5
GLEN WHITE	CESSNA 195	1861	6
CHRIS HENRY	CESSNA 182	1711	7
NEVILLE GLEW	SPITFIRE	1686	8

ARF RESULTS

CONTESTANT	MODEL	RND 1	
ROGER CARRIGG	STEARMAN	2036	1
TREVOR PUGH	GILES 202	1958	2
IAN LAMONT	YAK 54	1895	3
JOHN LAMONT	EXTRA 300	1887	4
GRAEME ALLEN	PIPER SUPER CUB	1810	5
GRAEME FRAUENFELDER	PIPER J3 CUB	1697	6
BARRIE REABY	RV4	1561	7
RICK PIMBLOTT	MIG 3	1529	8



Noel Findlay was the clear winner in Sportscale flying his immaculate DH. Gypsy Moth.



Roger Carrigg won the ARF section with his Stearman.



David Balfour was the winner of the Rally award for his fine performances with his Curtis Robin, Davis DW-1 and Fairchild 24.

Sportscale and Rally at Albury.



Ken Osborne's collection of scale models reflects his rather eclectic interests.



Ken's 1/4 scale model of the Ray Stits "World's Smallest" aeroplane flies quite well on a OS .15. Model needs power on for landing as the glide angle is very steep with the tiny wing.



Twin Cities member Neville Glew has moved on from his foam Corsair to this nice Spitfire Mk.VIII from a Yellow Aircraft kit. Model took second place in the Rally awards.



David Balfour's latest model is this 1/4 scale Fairchild F-24 in RAAF markings.



Noel Findlay's immaculate Bristol "Bulldog" had an unfortunate accident when taxiing prior to take off.



Phil Shufflebotham turned up on Sunday and took his usual keen interest in Gary Sunderland's WW1 aeroplanes.



Graeme Allan received the third place award in the rally with his Piper Super Cub.



David Balfour also flew this Davis D-1W from his extensive fleet of scale models.

Guidance Notes for Builders / Pilots of Giant Models.

(Clive Butler)

These notes are an attempt to provide the modeller proposing to build a "Giant" model with some guidance on the requirements of MOP015 relating to the inspection and certification process. Although this process may, at times, appear onerous please accept that it is formulated with the safety (both of people and the model) in mind and is not a deliberate attempt to make life difficult. Please also accept that the Inspector you have chosen, not only has your best interests in mind, but is also legally obliged to follow the MOP. Cutting corners is not an acceptable approach to producing a safe aircraft with any hope of longevity.

Steps in the certification process.

Step 1.

Assessment of building drawings/ARF kit/pre-built model and determination of building inspection schedule based on the experience of the modeller and quality of design.

Step 2.

Assessment of the proposed electronic equipment, control linkages and engine suitability.

Step 3.

Carry out scheduled inspections during construction.

Step 4.

Carry out pre-flight inspection.

Step 5 .

Observe and log test flights (min. 3)

It is critical that any modeller intending to build a model that will have a dry mass of 25Kgs or more contacts an MAAA Heavy Model Inspector BEFORE commencing construction of the model. The Giant Model Inspector shall assess the building drawings, ARF kit or pre-built model, to determine when the inspection schedule should commence, taking into account the degree of complexity of the project. (MOP15 - 6.1.2.1) The number and timing of the inspection program should be based on the experience of the modeller and whether or not it is a "proven" design. (an enlarged commercially available plan shall be treated as an "own design"). (MOP15 - 6.1.2.2)

DESIGN.

Consideration of the design should include general design concepts such as wing incidents, decalage, washout and thrust, as well as construction methods, materials, fasteners and fittings to be used.

STRUCTURE.

Wings.

It is necessary to consider what forces will act upon them in flight and on landing.

Biplanes - The wings should be considered together as a unified structure. This means that the integrity of the interplane struts and wires is fundamental. Correspondingly the spars can be much lighter than those of a cantilever monoplane.

Cantilever monoplanes - Here the load bearing structure is quite different. The strength of the spar will be crucial. It should be carefully determined at and near the centre section. The upper elements of the spar will be in compression during level flight and the lower component will be in tension. Their cross section should be adequate and the materials should be suitable. Consideration should be given to the loads imposed on landing by the undercarriage (if mounted in the wing) as well as inertia.

Multi engines - Where two or more engines are mounted on the wings they will alter the loads. Not only will they contribute a large additional down force on the wings when landing, but if they have substantial forward overhang, they will cause considerable torsional force.

Struts and wires - These should be fully load bearing. In most cases struts have to perform in compression as well as tension and should not bow in compression. The attachment points for both struts and wires should be designed into the structure to adequately spread the load.

Tail Group.

The most likely problem to arise in the tail group is flutter. This may be caused if the construction is too light or by unbalanced surfaces. Heavy elevators and/or rudder hinged at their leading edge with no counter balance should be avoided.

Fuselage.

Structural failure of the fuselage is not common; however particular attention should be paid to the area where the engine/s are attached and

their method of attachment. The use of flexible mounts is somewhat contentious, so if there is any doubt it is probably safer to mount them rigidly.

Control Surfaces.

These should be light but rigid. Small gaps, strong hinges and horns locked into place. Consider static or dynamic balance for the surface.

Control Linkages.

The control linkages, clevises and horns must be able to withstand the maximum torque output of the servo. The minimum dia. for pushrod ends used on primary control surfaces should be 4-40. Pull/pull systems are recommended where appropriate and heavy duty servo arms must be used. (MOP 15 – 6.3.1.5)

Adhesives.

There are a large number of very good adhesives available for various applications. The builder should discuss what he intends to use for different jobs.

As a general rule, tension should not be placed on an adhesive and where necessary this should be avoided by the use of screws, bolts or gussets to give additional support to the joint.

In particular the engine bulkhead (firewall) must be properly attached employing screws or well engineered joints. Where there is tension that would tend to delaminate ply there should be adequate bolts that go through the whole thickness.

ARF models.

Because it may be difficult (if not impossible) for the inspector to determine aspects of the construction undertaken by the manufacturer at the factory, ARF models must be "inspected to the maximum extent possible, and ensure that adequate test flying is carried out to confirm the structural airworthiness of the model" (MOP 15 - 6.1.2.4)

CONTROL SYSTEMS

In general the equipment must be of high quality and principles of redundancy and failsafe (in the true sense of the word) should apply.

The minimum requirements for control systems are as follows:-

Radio Systems.

The transmitter and receiver/s used must be tested and subject to ongoing checks strictly in accordance with the MAAA frequency Directive. This means that both the Tx and Rx's have to be certified and that 10KHz operation is not allowed. (MOP 15 – 6.3.1.1)

Receivers.

It is recommended that two receivers, with separate power supplies, switches and wiring, sharing each of the primary controls be used. However the question of redundancy is a contentious matter and should be discussed with the inspector. Some 2.4 GHz systems will not support two receivers being used from one transmitter, in such cases attention should be paid to battery redundancy and the possibility of optically isolating Rx and servos

It is recommended that Failsafe be used on the throttle channel to reduce power in the event of loss of signal. For most PPM systems an add-on Failsafe would be needed. . (MOP 15 – 6.3.1.2)

Batteries.

Battery redundancy is REQUIRED. This may be provided by use of separate batteries for each receiver or a common supply using a battery backer system from a power board or other similar device.

Total battery capacity shall take into account the number and power of servos, the required throws, the size and speed of the model and the expected number of commands to be exercised in flight. (MOP 15 – 6.3.1.3)

Servos.

While the MOP specifies minimum torque required for servos on the primary control surfaces, it is always best to calculate the expected load. If you do the calculation, you may be surprised!

Torque = surface area x chord x airspeed² x torque coefficient.

Or try the calculator available on :-<http://www.geistware.com/rcmodeling/calculators.htm>

It is advisable to use a system that allows you to supply power to the servos independently of the receiver/s.

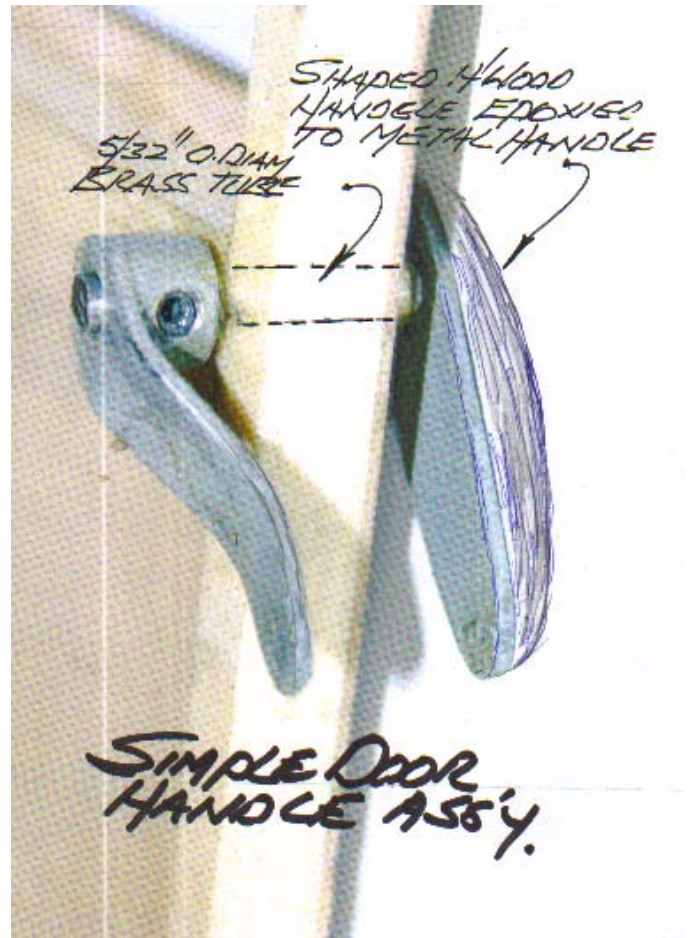
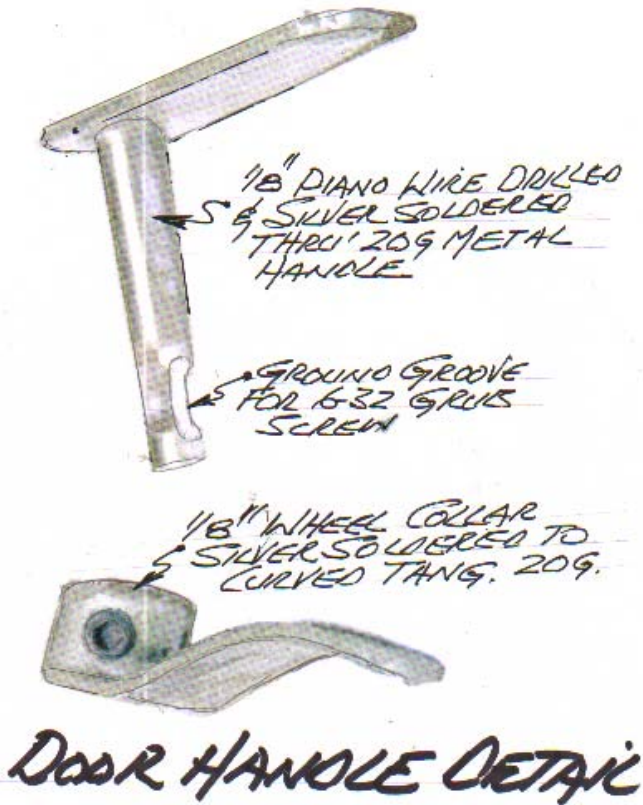
Mechanical or other means of boosting torque supplied to a control surface may be taken into account when considering servo torque requirements on a control surface. This may be in the form of a boost tab or similar system that assists control surface movement. (MOP 15 – 6.3.1.4)

(continued on page 8)

Barrie Reaby's Fairchild F-24 "Ranger"

Barrie is getting on with his Fairchild and sent these pics of his method for constructing the cabin door handles.

Looks simple and would suit many other designs.



TWIN CITIES MODEL AERO CLUB
www.tcmac.com.au

26th Annual SEAPLANE EVENT
OCTOBER 16th, 17th and 18th 2009

New Highway Check web site for details
Wymah Valley Retreat
TCMAC Flying Site
Albury

Location: Lake Hume Albury
Accommodation: Wymah Valley Retreat
Address: RMB 204, Wymah Road, NSW
Bowna, 2644
Phone: 02 6020 3236
Fax: 02 6020 3288
Mention TCMAC for discount accommodation
Dinner at the resort Saturday night
Register on TCMAC website www.tcmac.com.au
Details Contact
David Balfour
Ph:(02) 6043 3169 Mob:0407953903

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Guidance Notes for Builders / Pilots of Giant Models.

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TEST FLIGHTS

A minimum of three (3) flights are required. (MOP 15 – 6.5.1). Each flight must be logged and at least the last two test flights to be made must require no re-trim, repair, or major adjustment to the airframe or radio before certification (MOP 15 6.3.2). All pilots of Giant models shall have Gold Wings endorsement for the type of aircraft being flown. (MOP 15 6.3.3).

Annexures

Pre and During Construction/Assembly Inspection Assessment - Form No. MAAA030.

Checklist for Inspection of a Model Aircraft - Form No. MAAA014
Flight Test Programme/log.

(Lack of space prevented inclusion of these forms but they can be obtained from the MAAA website together with all MOP's mentioned in this writing.)

A Vickers Vildebeest

By Alistair Heathcote

Earlier this year I visited the Royal New Zealand Air Force museum in Christchurch. It is now free entry but for \$8 you can get a conducted tour of the workshops and storage areas. A visit is well worthwhile if you are in the area. I took the tour and discovered a Vickers Vildebeest being expertly remade from, essentially, a heap of scrap parts.

Some background: The British Air Ministry had firm rules about naming aircraft in the 1930's. Torpedo Bombers were named after mammals and General Purpose aircraft after figures in history. Most manufacturers chose to use names starting with their own initial letter.

As a result, this original Torpedo Bomber design was named Vickers Vildebeest after the African antelope, and later the General Purpose version was named Vickers Vincent after the 1980 British naval victory at Cape St. Vincent. Obsolete before it was in service; the aircraft was not particularly popular with its crews and in some circles was known as the "lumbering thing".

The first Vildebeests entered service with the RAF in 1932 and in 1935 the New Zealand Government bought 12 for use by the RNZAF as front line coastal defence and reconnaissance aircraft.

Over the next 5 years, the RNZAF acquired, second hand, a further 27 Vildebeests and 62 Vincents for use in a variety of roles in NZ and Fiji. Although already obsolete, they were used for coastal defence, aircrew and pilot training, reconnaissance, bombing, drogue towing and army reconnaissance. Phased out of service in 1944 they were clearly a significant feature of NZ wartime activity.

The museum's Vildebeest is the remnants of NZ102 which served from 1935 to 1944. It will eventually be restored (using some Vincent parts as well) for static display.



How big was it? Span 14.7 metres, length 11.2 metres, weight 2165 kg, max speed 229 km/hr, range 2000km. It was powered by a 660 hp Bristol Pegasus or a 825hp Bristol Perseus (the first successful sleeve valve engine). Armament was one Vickers machine

gun to the front, a Lewis to the rear, and 1100kg of bombs. Yes, a big aeroplane!

Progress has been very slow employing volunteer labour with many parts having to be reverse engineered from corroded original parts. Standard of work is however very good as can be seen in the photos included.



DETAIL SHOWING COMPLEXITY AND WORKMANSHIP



NEARLY COMPLETE FUSELAGE FRAME



THE COMPLETED PEGASUS ENGINE READY TO INSTALL



Test Flight at Brooklands



Vildebeest at Brooklands (UK) awaiting delivery



SOME OF THE BITS

Minutes of the VFSAA Annual General Meeting – 2009

Date: 6-8-09

Start: 8.25pm

Location: FNCV

Attendance: 24

Previous minutes: read

Matters arising: nil

Minutes accepted by Noel Whitehead, seconded Gary Sunderland.

President's report: read

Report accepted by Anthony Mott, seconded by John Gottschalk.

Treasurers report: read, copy circulated to members present.

Report accepted by Graham Godden, seconded by David Law.

General business:

Tony Grieger nominated Frank Singh for honorary membership.

Accepted by Gary Sunderland, seconded by John Lamont.

Annual awards.

Hargreave Trophy	David Law
Temple Trophy	Mario Schembri
Prop & Spinner	John Lamont

Executive and Committee for 2009-2010.

President	David Law
Vice President	John Lamont
Secretary	Keith Schneider
Treasurer	Tony Grieger
Public Officer	Anthony Mott
Contest Director	Keith Schneider
Committee Members	Noel Whitehead Peter Bailey Ian Lamont Graham Godden Joe Finnochiaro Steve Malcman

Meeting Closed: 8.45pm

VICTORIAN FLYING SCALE AIRCRAFT ASSOCIATION INC.

Statement of Receipts and Expenditure for the period 1st July 2008 to 30th June 2009.

Opening balance as at 01/07/2008:	Cheque account -	\$ 2,297-72	
	Cash on hand -	<u>185-72</u>	2,483-44
 <u>PLUS</u> Receipts:	Subscriptions received	1,860-00	
	Bank interest received	11-40	
	Supper donations	202-25	
	Competition entry fees	<u>640-00</u>	<u>2,713-65</u>
			5,197-09
 <u>LESS</u> Expenditure:	Trophies and Prizes	655-00	
	Vicscale goody bags	559-64	
	Advertising (VMMA newsletter)	110-00	
	Newsletter expenses	265-00	
	VMMA affiliation fee	20-00	
	Secretary & Treasurer expenses, postage and stationery	176-82	
	Temora Top Gun sponsorship	300-00	
	Hall hire	<u>350-00</u>	<u>2,436-56</u>
 Closing balance as at 30/06/2009:			\$2,760-53 =====
 Represented by:	Cheque account balance 30/06/2009 -		2,677-38
	Cash on hand -		<u>83-15</u>
			\$2,760-53 =====

Included in the closing balance are the following funds which were raised to sponsor the Australian 2008 W.S..C. team, which did not eventuate, and the funds are now being held to sponsor a future Australian W.S..C. team.

W.S.C. team trial entry fees	\$ 150-00	
Raffle proceeds	464-35	
Supper donations	<u>197-75</u>	
	\$ 812-10	
	=====	

WHAT'S ON?

October 2-4th	Scale Weekend in South Australia (Scale Competiton and general scale flying)	CONSTELLATION FIELD
October 1st	General Meeting	FNCV
October 18th	Scale Rally	P&DARCS
October 25th	ARF Scale Day	BALLARAT
November 29th	Scale Rally / mini Comp	ROSEBUD
December 3rd	General Meeting	FNCV

NEXT MEETING

General meeting, Thursday, October 1st, 2009, commencing at 8:00 pm at the headquarters of the Field Naturalist Club of Victoria, 1 Gardenia Street, Blackburn. Visitors and guests are welcome to attend.

Committee meetings, Thursday, October 29th, and November 26th, commencing at 8:00 pm at the home of Noel Whitehead, 13 Seattle Street, North Balwyn.

NEWSLETTER

V.F.S.A.A. Inc.

Reg. No. 27093N

If undeliverable, please return to
Unit 5, 1326 Main Road,
Eltham, 3095.

SURFACE

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