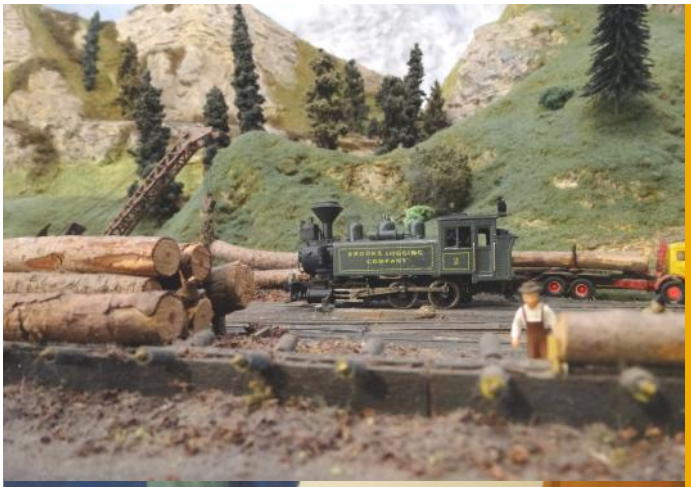
CONROD
OCTOBER 2015

The Otago Model Engineering Society



Club Dates

Working Bee	10.00 am	First Saturday of the month
General Meeting	7.30 pm	Second Monday of the month
Boat Group	7.30 pm	First Wednesday following General Meeting
Engineering	7.30 pm	Third Monday of the Month
Scale Railway	7.30 pm	Each Tuesday
Thursday Toilers	9.30 am	Each Thursday
Committee Meeting	7.30 pm	Last Monday of the month
CONROD Deadline	12.00pm	Friday following Committee Meeting

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www.omes.org.nz
www.facebook.com/OtagoModelEngineering

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President Report

There has been much discussion about the batteries of the club 08 electric locos. I am satisfied that (while obviously they will eventually need replacing) at this stage the batteries are adequate so the other systems of the motive power need to be checked out first. This is now being done. Whatever the reason for the current doubtful reliability, with the party-season fast approaching we have to get it sorted. The Engineering blokes have decided not to do any maintenance on the locos for now, but are continuing to play their part by completing the upgrade of the outdoor track.

Another matter we have to get sorted urgently is finding a convener for next year's Festival-Week. So far four Members including myself have offered to be part of the organising sub-committee but we need someone to oversee the whole affair, and I'm not prepared to take it on again. There are very many details to take care of, but also plenty of experience in the club to draw on, so please consider whether you can help out in this way. Otherwise for the first time in 63 years there might not be a Festival-Week – what a let-down for the public who look forward to it each year. And subs would need to be double or more, compared to what they are now. Come on – we can do better than that!

The new roller-door for the steaming-up shed is being made and should be installed soon. The materials to wall in the space above it have been bought, but the door has to go in first and there could be a few days when the top part is left open. Meanwhile please do not attempt to use the old door.

Continues Over.....

Boiler Inspectors
Des Burrow
454 5565
Colin Downing
454 2528
Logan McGhie
476 1425
Allan Stevens
455 8665
Jim Woods
476 1369

Boiler Records
Geoff French
454 2171

Safety Group
Gary Douglas
476 7311
Chris Kennedy
466 7372
David McBride
476 1992
Stewart Robertson
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Jim Woods
476 1369

The boiler-committee is back to full strength as the Committee has accepted the appointment of Logan McGhie as its fifth member, plus Geoff French to look after the boiler -records. Many thanks to both for agreeing to accept these duties.

The Committee has approved the cost of setting up the OMES logo at EmbroidMe beside the Teeth on Portsmouth Drive. When this is done (hopefully by the time you read this) every Member will be able, at his own expense, to take in any clean garment, *e.g. o*veralls, T-shirt &c, or, alternatively, to buy a suitable item from the extensive and moderately-priced range of gear for sale, and have the logo embroidered on it. Embroidery is both cheaper and more durable than screen-printing. This measure of uniformity will enhance the feeling of comradeship in the club and help identify us to the visiting public. And a reminder - there are still some baseball-style caps available @ $15 each.

If anyone happened to find a stray key with a green wire tag in their pocket it's probably the mower-shed key which went missing from the key-cabinet on the wall in the corner beside the N-scale model railway a couple of months ago. Its return would be appreciated – no questions asked!

We have been unable to find a guest-speaker for the next General Meeting so a good number of Bits on the Table would help fill the gap. Since suitable speakers are hard to find, if anyone can suggest one for our monthly meetings please let a Committee-Member know. Any topic which interests you would probably also interest a good number of the others at the Meeting.

Michael Forrest.

Editors Desk

Summer is definitely on its way! The days are getting longer and the temperature is now regularly reaching double digits. The finer weather has also meant progress is being made on maintenance tasks outside as we move into the busy party season. The new roller door on the steam shed has been ordered and the materials for the door surrounds have arrived and are being painted.

Progress is also being made in preparation for Steam Trials, to be held on the 7th and 8th of November. It has also been raised that this could be a good chance for a club social weekend. If you would like to enter the Steam Trials, contact Jim (476 1369, james.woods@otago.ac.nz) or myself (476 3663, conrod.omes@gmail.com).

Continues Over.....

In the News

This months “In the News” section features people building interesting things in their garages. We start with “The Swarm” from the UK. As the technology used in drones becomes cheaper and more accessible it was only a matter of time before someone strapped a few of them together and used it as a personal helicopter. “The Swarm” features 54 counter rotating props in six groups. It will lift about 164 kg, has a power output of 22kw and will last for around 10 minutes on a charge. Build cost was in the region of $14,250. Check it out here https://www.youtube.com/watch?v=t5JgnMJzCtQ .

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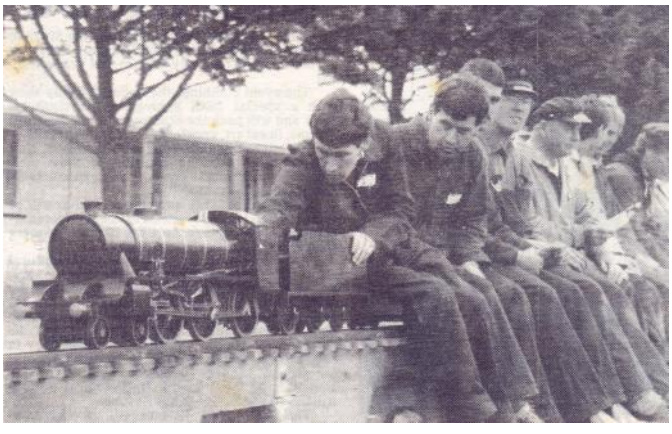
I have long been amazed by the GL5 group in the UK who run scale train movements in 5” gauge, to a timetable, with signals, and full trains of rolling stock. Fitting radio control to a 5” loco seems like a natural progression. A video, released on YouTube, shows a 5” gauge Black 5 loco bulling 25 items of rolling stock around the Leayland track all without a driver. Well worth a look for those of you with internet https://www.youtube.com/watch?v=z5gBHUCQSCM .

From the Archives

Steam Trials have long been a part of the model engineering calendar in the South Island. One problem that has always plagued them has been the lack of a reliable measuring system. With digital recording systems becoming more widely available this problem has been mitigated and the OMES Steam Trials in November will be measured using the Station Road Steam digital recording system (Screen-shot left). Pictured above are the Cullimore brothers from Ashburton taking part in the OMES Steam Trials; March 1991.



Lachlan Clark

Boating Group Report

For our September meeting we had 16 members present and as there were no notices we moved straight away onto bits on the table.

Midweek Boating

A number of members managed to do some boating on the pond on two fine days over the past month. These sessions are always popular and are looked forward to by the members concerned. In short they are a good midweek outing with ideas shared, problems solved etc.

Bits on the Table and Workshop

Kevin Gamble has finished painting his most recent creation: the Tug "Zwarte Zee". This is a Billings kit that he had purchased and started many years ago but never completely finished. He has brush painted it; some of it with very small brushes which took many hours painting the many small fittings that are on the model. All I can say is it looks great.

Next up was Gordon Duell who has been working, with others on the airboat project. He brought along the Mark 2, having made several alterations to the original Mark 1 model. Changes include a slight "V" to the bottom of the hull instead of the original flat bottom. This has improved the handling making it less likely to flip over. One thing learned from the air boat flipping over is that the motor could still be run under water as long as it was done very, very slowly. Being able to run the motor in liquid cooled mode did reduce the amount of wading required. Another change has been the motor position which also seems to have improved the performance. The airboat is still a work in progress. Gordon finished his progress report with a demonstration of how difficult the airboat is to control when run on the carpeted floor.

Bruce Milne also had two airboat hulls that he has been working on, he has the sides and decking fitted so they are still in the early stages of the build.

Murray Vince has made an artist's pallet knife and a half size model of a L1A1 FN FAL rifle. This is a military rifle that he had to carry when he was in the army.

Continues Over.....

Hamish Tyson has been casting rudders out of resin. These are for his latest project, a scale model of the New Zealand Navy training ship "Moa".

Gary Douglas then gave a session on understanding boat plans, what the line drawings mean, how to interpret them and ways of making formers. Most plans give three different options for building a model boat hull:

-Horizontal Bread and Butter construction.
-Vertical Bread and Butter.
-Frames to make a hull by planking.

Next Meeting

We are hoping to start with boats on the pond with a 7am start followed by bits on the table in the lounge.

Henry Goosselink
Photos: John Anderson

Air Boat Project

It was unfortunate that I did not have enough to report on the project to make the deadline for last months Conrod, but a lot has happened in the last few weeks.

Prototype no 1 was launched, and it settled in the water with a reasonable free board considering the boat was a lot heavier than the design weight. The next move was to see what was going to happen when the motor was started up. Well, much to our amazement it took off across the pond at a quite sedate rate of knots, after a few turns around the pond a decision was made by the design team that it might be time to rev things up a little and see what may or may not happen.

Continues Over.....

First idea was to increase the battery size, to give our 1000kV brush less motor, which is swinging a 6inch 3 bladed prop, a bit more power and increase the revs. Just to enlighten the readers on the make up of design team, each one is an expert in his own field and as you read on you begin to wonder where this field is (I have heard that it's known as a bull paddock).

Time to test out this new idea. Off across the pond at a much quicker pace but this was to reveal that we had a stability problem. When our dream machine turned sharply it flipped over instead of sliding across the water. Back to the brains trust who, I might add, have discovered that the motor works underwater. With small bursts of power you can retrieve the boat but don't be in a hurry. Back to the workshop we went and dried the boat and motor out. A shot of WD40 through the motor, let it run for a few seconds, and all was ready to go again.

After a lot of talking and comparing other types of air boat hull shapes, the outcome was that the bottom of the hull needed changing and the safety cage, motor, and rudder needed to be lowered as the centre of gravity was too high. The hull was first up, a 6mm dead rise to the bottom of the hull which gave a moderate V shape with the hope that the hull would climb up to plane quicker and have better stability when cornering at higher speed with lesser tendency to roll when sliding in or out of a tight turn. The safety cage was lowered by 20mm along with the motor mount which is now made from flat bar alloy and is designed to be removed from the hull for maintenance or repairs. The final modification made was to the rudder. This was shortened by 30mm, the reason being that it appeared the air flow from the prop was causing the rudder to drag the boat over, this may be right or wrong.

Back to the pond with fingers crossed, but as luck would have it the rudder servo refused to work with the result, no steering. After much head scratching it was decided to run without a rudder, only problem being the mid week boating guys were on the pond as well. This could get interesting, as not really knowing what was going to happen, when we unleashed our latest effort. The rudder was set so that boat would hopefully travel in a large circle. With everything ready, and the boat in the water, I very slowly moved the throttle stick and by about half throttle the boat was performing extremely well. Very stable considering it was in a constant turn. Now let’s see how it will go at full throttle. Good speed, and handling reasonably well but just not up to our expectations, which was interesting because none of us really knew what the outcome would be.

It was decided to fit a bigger motor. Remove the 1000kv motor and replace it with a 2200kv motor. With a 30amp electronic speed controller this would not be a problem. Back into the water the boat went, on with the power and the boat really came alive. Straight upon the plane, across the pond and up the bank. We had finally cracked it, even if we couldn’t steer it. Back to the workshop to sort out the rudder servo by replacing it with one that draws less power (more on this latter).

Bill and I managed to get back to the pond between rain showers, the performance was quite startling and, at this stage, fast enough until we master the handling of this type of craft. Next month will hopefully see more testing of different types of batteries.

Gordon Duell

Engineering Group

This month's engineering group was like those of old with 16 member's present, great to see. Also great to see Gordon Rust-batch back on deck after a bit of plumbing work to the old ticker.

The first ½ hour was taken up with discussion regarding the club's electric locos. We have advised the committee of what our opinion is on the best way forward with these club assets.

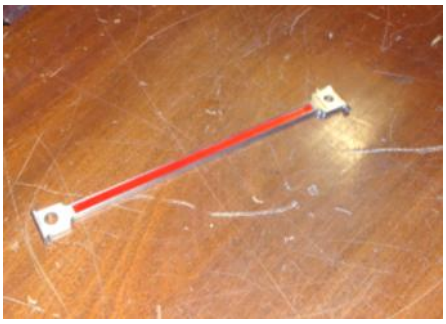
Brian Wolf gave us a run down on his new English Class 66 electric loco. It is a fine piece of work and we are delighted to welcome it to the fleet.

Colin D gave a run down on progress with the new steam shed roller door and mod's to the opening. The extra light the new covering will let in will be fantastic. Jim updated progress on track repairs: the steel plates are all cut to length. They still need holes drilled and a few other bits done. We also talked about other maintenance issues. It would be nice to see the wall in the station painted all the way along to the steam shed. There is to be an air accumulator cylinder fitted into the station points. This should give a bit more reserve and allow better operation of these points.

Bits on the Table

Mel gave a wee talk on the hoist system he and Chris (with some help from Colin D) have put in his workshop. As usual, it is another Kennedy masterpiece.

Geoff showed off his Railmotor tender. Nearly finished, just needs some beading around the top edge and it will be ready for a coat of paint. The next meeting will be at Geoff's place. If you want to come, contact either Geoff (454 2171)or Jim (479 7304) for directions.



Also, planning is well under way for an OMES/ South Island Locomotive Efficiency Trials in November. All steam loco's welcome. Maybe also tethered car trials too. This is to be a fun weekend, no serious win at all cost types need apply. For more info, contact either Lachlan or Jim.

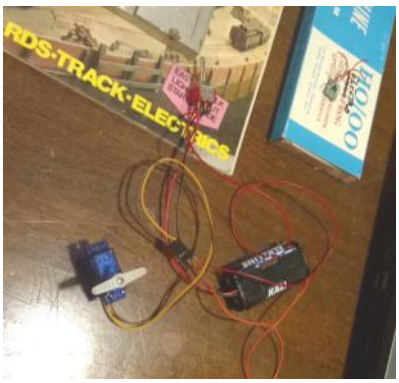
DRO

Next Meeting Workshop Visit	South Island Model Locomotive Efficiency Trials
-Next meeting is at Geoff French's place -Contact Jim or Geoff for directions	- Saturday 7th November - Sunday 8th November Open to all steam locomotives with a current boiler ticket and weighing under 300kg.

Scale Railway

Discussion at our last meeting was opened with a review of the club's Model Train Expo and points raised were noted for any future show.

John Knight has now solved his point motor dilemma (Conrod, July 2015). The simple solution is not electronic, but mechanical. First remove the electronics in the servo, so that it can be driven by power supplied from a centre tapped supply using a single pole changeover switch. Limit switches are included in the circuit, and operated by the servo, to set the limits of point movement. John also talked about 'memory or muscle wire' that may have application in point or signal operation. This is wire that returns to its original shape after being heated by a current passing through it. Search Google 'memory wire model railway' for more information on how this wire has been used for model railway applications.



Geoff Murray showed a board for a fast clock that Doug Stokes had made and asked if anyone had info (Model Railroader Aug 1997) for this, since it isnt available in the club library (A copy has now been found). What is a fast clock? It's used in model railway timetable running to speed up time – might be 4 – 10 times faster, to simulate increased distances on the mainline. They can be built in digital or analogue versions, and there are also software fast clocks for computers. Geoff also emphasized that we should all take care when using the controllers on the club layouts. He has repaired two controllers in the last 3 weeks, both of them having damaged speed pots. One speed control knob had been forced past its natural stop, so please be more gentle on our gear! Geoff had also attended to faulty operation of the yard crossover on the red main line. Thanks for your maintenance work Geoff!

We also discussed the garden railway. Stuart Reid has some ideas on this. The sloping ground that could be used may either work in favour or against track designs, so any track layout would have to be carefully planned.

Finally, Giam Cole showed us a Roundhouse Shay 360 kit he had assembled. The loco is a model of a 42 ton 2 truck 3 cylinder Shay, and has some small parts with tricky assembly. Giam has done an excellent job of putting the kit together and a test run showed that it runs well on the track.

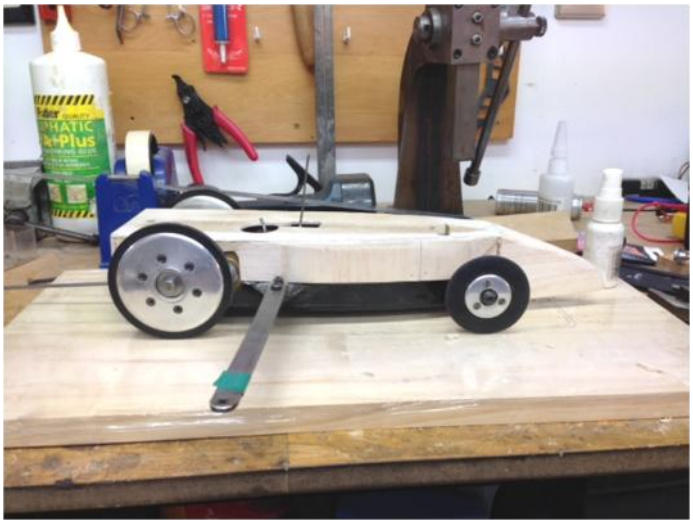
Brian Niven



Tether Cars

From The Pits

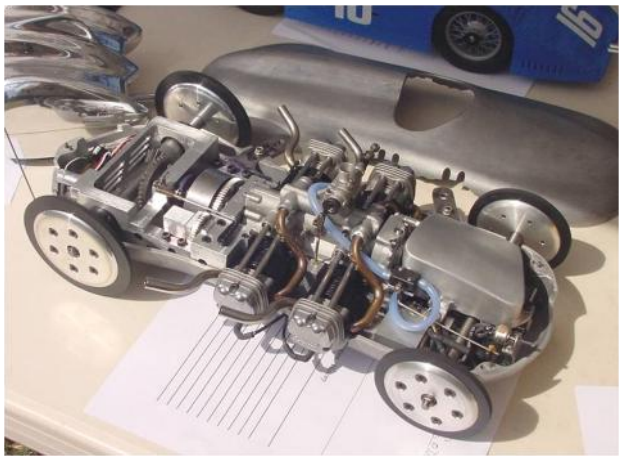
The new extension safety fencing beside the ramp has been approved so we'll be arranging a working bee to install it soon.



From The Workshop

The talk is Chis Kennedy has been making changes to the "hot rod" and putting it on a diet, (the same as the owner). The new look body has changed from cast aluminium to "balsa" including an extended nose cone. These changes have allowed Chris to drop the weight by around 200gms. The body is still to be filled and painted, (the cars, not the owners) so we are looking forward to seeing the results.

Hamish's new car still hasn't had a run on our track, so hoping this will happen over this month.



Trials Weekend

November 7th - 8th has been set aside for a club trials weekend, so try and keep this weekend free as we will try to run if everything goes to plan.

Right: When one motor is just not enough.

Above: Chris's now "balsa" hot rod body.

That's about all for now, looking forward to the improvement in weather and some good run days.

Murray Wright

Members Projects

Stuart Reid has been playing with the model pictured right. It was purchased from the now defunct Roslyn Books & Toys. It is very small, compare to the 9mm track and the standard N scale wagon behind it. It is also interesting in that the motor is in the tender but turns the large driver wheels via a drive shaft through the cab. Not a common drive system in a loco this small.

Continues Over.....

James Tamis has been entertaining the Scale Railway group on Tuesday nights with his live steam road vehicles including this very nice Mamond Fire Truck.

The airboat design is proving very versatile. Gordon has demonstrated its capability on grass, carpet and water. Stuart Reid has also proven they successfully work on the outside multi-gauge track.

Notice Board

Steaming Shed Roller Door

Because of the hazardous state of the roller door to the steaming up shed, due to severe corrosion, the existing door is NOT to be used at all, lest a serious accident occur. Entry to the shed is of course still possible through the side door. The intention is to install a normal height garage door and wall in the space above, which should be accomplished in about three weeks.

Bookings

Date	Crew	Time	# Attn	Event
7th November		All Day		OMES Steam Trials
8th November		All Day		OMES Steam Trials
24th November		4pm - 6pm	120	Christmas Party - Porse
28th November			100	Christmas Party - Lodge
4th December	TT	9.30 - 12.00	50	Christmas Party - Reid Park
7th December	TT		50	Christmas Party - DCCCA
9th December	TT		50	Christmas Party - DCCCA
13th December			150	Christmas Party - Grants Braes

The Great Little Train Show

This coming Labour weekend The Southland Society of Model Engineers are hosting The Great Little Train Show. 24th and 25th of October, 10.00 - 4.00 daily, Surrey Park, Invercargill. Photo: Southland Society of Model Engineers

Materials

If you are after small amounts of brass, copper, or aluminium, Mitre 10 are stocking the K & S range. http://www.ksmetals.com/

Duplex Boilers

MEANZ have issued a update on their position regarding Duplex Stainless Steel and its use in boilers. This is available from http://www.pnmec.org.nz/meanzpapers.php

Health and Safety Report

This explains why there is now a crater where the Steam Shed used to be.
Source

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CONROD

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