The Generator

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Palmerston Model Engineering Club
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Managers of the Marriner Reserve Railway - Marriner Street - Palmerston North
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Model of the Month

The new two truck Shay from the workshop of Ken Neilsen was seen at the Marriner Reserve Railway recently.

What's on this month and in the future
PNMEC Club Calendar

Track running at Marriner Reserve Railway	June 3th	1pm - 3pm
	June 17th	1pm - 3pm

The Palmerston North Model Engineering Club
General Club Meeting is to be held on 24 May 2018.
Fin Mason will give a talk on
The development of the stormwater, drainage system and flood protection measures in Palmerston North City

Report on March Club Meeting

The March meeting was a "Bits and Pieces" combined with a "Stuff Up" session held at the hearing Hall.

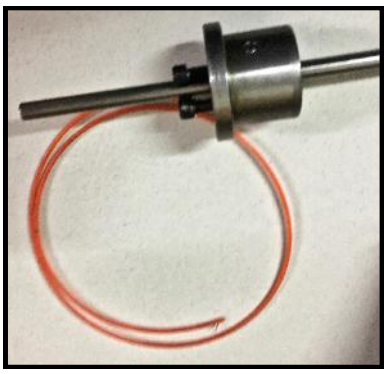
Leading off was **Richard Lockett** who described his design and building of a handlebar mounted map holder for a group of lady friends who compete in cycle "orienteering" events. The design brief was for a table type of system which could be mounted on the handlebars, hold the map so it was easily readable and did not obscure the way ahead. Some riders also wished the table be rotating so the route orientation was always ahead. Richard had the latest iteration of the design to show us and apparently it has been a success. One problem encountered is that not all cycle headsets are the same but Richard has managed to source a variety of bits and pieces which he hopes will do the job.

Richard also recounted problems encountered in replacing worn brake pads on the hydraulic calliper disc brake on his mountain bike. He found it very difficult to spread the callipers sufficiently to get the new (unworn) pads into position. Richard had a few ideas himself for solving the problem and received many more from various club members.

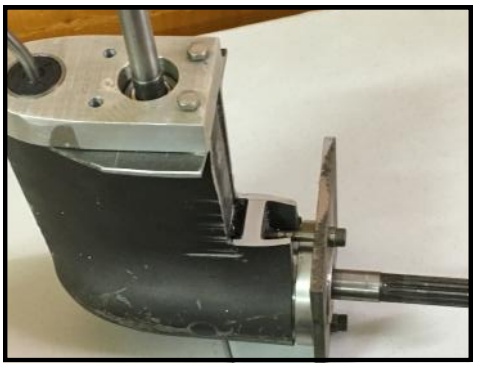
Graeme Hall related the problems he had encountered building a small five-cylinder radial aero engine.
The engine was displayed together with examples of t he pistons and piston rings and looks to be made with Graeme's characteristic attention to detail and finish. This engine is a little unusual for Graeme as he has used a set of castings. Most of Graeme's models are made by machining from solid. There were also a couple of rejected parts from Graeme's build of the 9-cylinder Bentley rotary engine a few years ago.

Bruce Geange had adhered to the theme of the meeting which was “Stuff-Ups and Cock-Ups” and had brought along some of the parts he had had to remake during the construction of his model Caterpillar tractor. These included a gear gate selector made slightly oversize and a chain sprocket which was not up to Bruce’s exacting standards.

Dave Bell described his need for a capstan tool holder for his Boxford lathe and the search for such an item. He brought along the one he had obtained and said that it would fit his lathe but needed rising blocks to raise the tool height.



Merv George showed a lathe spindle back stop he had made. The stop is held in the spindle with pins that are expanded with a screw. In order to hold the pins while the backstop is being set up Merv had used pieces of plastic line from a line trimmer which provided sufficient friction to hold the pins in place while adjustments are made. It looked to be a very useful device.



Chris Bjerga brought along some boiler parts for a small steam locomotive that he has been restoring. He also had a two-speed drive and gearbox from a small outboard motor which he has modified to be fitted into a 7.25”: loco that will be driven by a two-cylinder Honda engine. Chris also had a partly built oscillating cylinder steam engine for a 7.25” bush locomotive.

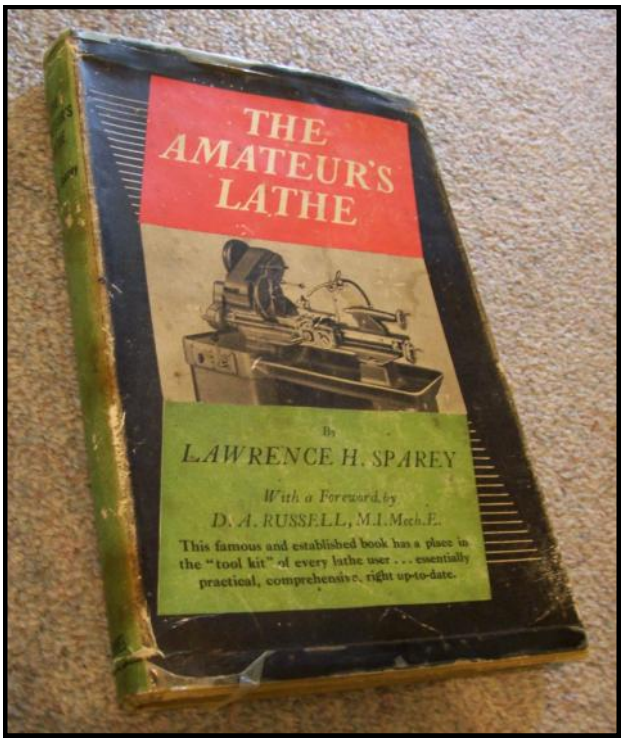
Report on April Club Meeting

Following the formal business of the AGM **Cynthia Cooper** gave a short talk about her many small tool kits. There was a brief but interesting “Bits and Pieces” session.

Ian McLellan brought along the tender of the 3.5-inch gauge Virginia he is building. He sourced the copper for this from an old gas fired water heater cylinder. We should be seeing the Virginia at the track soon.

Chris Bjerga brought along parts of a small (15 inches between centres) Wilton lathe that he is rebuilding. He discussed the procedures he plans to use to restore the worn lathe bed. This involves the use of metal filled PTFE tape which he had experience of while working in paper mills. This material was used to repair worm bearing surfaces on the heated rollers used in the mills. He also indicated that he had now located a source of a superglue which would adhere to Teflon, a material that is notoriously difficult to glue. He also brought along a nice parting tool with inserts that he had sourced from China through Ebay.com.au This site has a lot of items of interest to model engineers including metric hex head cap screws down to M3 thread.

Graeme Hall recounted the problems he was having with the ignition of the small aero engine which he described at the previous meeting.
Apparently high voltage does not scale very well and tends to find a shorter and unwanted route.



THE AMATEUR'S LATHE

Foreword by D.A. Russell - Author: L. H. Sparey

Here is a book that every amateur, every small garage proprietor and every light engineer will find of unending interest. The author has succeeded in giving a complete course of instruction embracing almost every process that can be accomplished on the highly adaptable small lathe. A refreshingly new approach to the amateur's problems, combined with an extensive knowledge of professional practice, enables the author to provide information and guidance on a range of subjects never before offered to the small lathe user. Here is no "scaling down" of professional usage, but a truly practical work by a man with full appreciation of the difficulties besetting the average owner, with his small workshop and small lathe, who nevertheless has a wide range of objects to be machined on it.

"Ed. We plan to have a book review as a regular feature. Please let us know of any books which you have found particularly helpful, motivating, interesting or just plain fascinating."

The PNMEC AGM

The previous minutes were read, reports presented and financial statement given. All approved.
The previous committee were elected for another year. There is still no Editor for "The Generator"
The recipients of the Compton shield were **Graeme Hall** and **Liam Puklowski**.
Both were surprised and delighted to win the trophy.

Letter from England

By Stan Compton.

The Monmouth Group who ran the 7¼" gauge track-site at Tintern using the land that carried the main line feeder track alongside the River Wye, has had to cease carrying passengers.
Such a pity as it was popular with tourists. I can recall many Japanese visitors who probably had never seen such a miniature railway before. Years ago I had taken my Caledonian Railway 5' gauge 2-4-0 tender loco for show and the group insisted I raise steam and haul passengers.
This was a day I will always remember. Usually I only carried a light load with such a small engine. I got the right of way, whistle and opened the throttle, CHOMP, CHOMP, CHOMP!
Never had I heard such a bark before I glanced over my shoulder and found a massive load behind me. I had taken great care to tune the exhaust and when I tried to open the fire door to add coal the vacuum held it shut. When I did get it open I was looking at a white hot fire.
The coal provided was Anthracite from a welsh mine, never again did the little loco repeat that performance.

After WWII British builders of motor cars tried to create an export trade. Having emigrated to Canada in the fifties I was to witness the unsuitable vehicles exported. There was an Austin pick-up truck that had been in the dealer's yard for a year. It was new but unsuitable being too narrow to fit the grooves created in back country roads. I discovered that Morris Minor cars resulted in the sump-plug boss getting smashed off. Just imagine miles from a town and losing all your engine oil. Hillman Minx cars had a cable to operate the throttle. Now in the snow, some always gets into the floor well. This thaws then refreezes, when the car is parked all day.

The driver returns to drive home and can't move. I doubt if any engineer was sent out to Canada to observe or enquire about the conditions.

I have heard all about the track maintenance at "Brooky Hill", so full marks to all those willing workers, without their efforts, accidents could happen when a set of points fail to operate. Sleeper replacement is demanding work down on the knees.

We have all heard about the vast amount of plastic in our oceans. Just by chance a container of plastic toys got lost overboard and thousands of plastic ducks went out into the sea. They took ten months to reach Alaska from the Pacific in 1992. By 1996 some reached Washington state, more ducks went up through the Bering Strait, across the Polar Regions trapped in the ice for several years. Released to travel into the North Atlantic to Canada and New England. Another group were going to UK shores. Marine Scientists used the information from the ducks to learn about ocean currents.

Many years ago I had a Hay and Straw business in Suffolk, UK. It is important to always put the loads on a weigh bridge. At Harlston in Norfolk the old weigh bridge was so small the rear wheels spanned the moving plate, no problem, the operator produced a large wooden wedge. "Back off and I will put the wedge under the inner wheel." I was told, and of course it worked!

Shay Geared Logging Locomotive

By Richard Lockett

Those PNMEC club members who have the passion for the live steam railway side of our hobby will know that Ken Neilsen builds an exceptionally good steam locomotive! Over a period of about sixty years locomotive have been frequently turned out from his workshop and they have all looked stunning in appearance, have run well and are super reliable straight out of the box.

With this in mind we have been eagerly awaiting the arrival of Ken's latest locomotive to have its first run on the rails at the Marriner Reserve Railway. This locomotive is a 5 inch gauge version of the Shay geared logging locomotive as described by Japanese Mechanical Engineer Kozo Hiraoka in his book "Building the Shay", first published in 1977. Ken was inspired to build the Shay through assisting John Tweedie with advice while John built the 3.5 inch version of "Building the new Shay", published in 2004. Ken liked the look of the older Shay better and thought that a 5 inch gauge version would be more practical once on the rails.

Ken doesn't get to club nights to show off his work so we have had only a couple of previews of the progress of the Shay when Ken brought a component down to the track on a Thursday to show during a cuppa. On one occasion Ken brought down the tender body to show, all made from brass with Ken saying that the profiled brass beading around the top edge was a bit tricky and that he didn't have to resort to cutting it to get it to fit all the way around! That's about eight ninety degree bends and some of us have worked with hard brass, annealing and trying to bend it to shape, we just looked at each other and shook our heads.
Thanks Ken.

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send us an email with your **Name, Club** and **Email** address to
pnmec@trains.org.nz with **"Generator Please"** in the subject line.