



# The Tucson Garden Railway Society

## TIMETABLE

Send Articles, Photos, Announcements to:  
Nick C Buchholz, 3401 West Blacksill Dr, Tucson AZ 85741-1419  
or email: [nbuchholz@greatscalemodels.com](mailto:nbuchholz@greatscalemodels.com)

June 30, 2013

### -Summer is upon us-

As is usual for July and August we will do without Regular monthly meetings. However things are still happening, See the articles on the Tucson Botanical Gardens. And the Garden Railways renewal offer later

### - July is Renewal Month -

Hello members,

Ruth is pleased to report that almost half of our membership have paid their 2013/2014 dues. For those of you who have not below is a reminder.

**MEMBERSHIP RENEWAL TIME IS HERE**

Current membership expires on June 30th, 2013.

Membership renewal for the 2013/2014 fiscal year is \$30.

Ruth is now accepting renewal payments for the upcoming year. Payments by can be made at the monthly meetings or by mail.

Do not send cash through the mail

**MAIL CHECKS TO:**

**Ruth Taylor**

**4081 S. Tarantula Hawk Place**

**Tucson, AZ 85735-5195**

Thanks,

Ruth Taylor

### McCormick-Stillman Railroad Park Trip

Willis currently has 38 signed up for the McCormick-Stillman Railroad Park trip. We will need some additional participants in order to meet my goal of \$20/person.

If you are not already signed up, Contact Willis ASAP. Around the first of September, Willis plans to open up this trip to non-members in order to meet our cost goals.

Contact Willis at

Phone: 760 – 0147 or by Email: [km6mv@cox.net](mailto:km6mv@cox.net)

### Garden Railroad Magazine renewal deal

Kalmbach Publishing is offering a deal for Club members who want to renew or extend their Garden Railways magazine subscription. To get the deal we need to send them the list of people renewing and a single check before August 1<sup>st</sup>

The text of the letter about the deal is as follows:

Dear Garden Railway Club:

To help celebrate 30 years of Garden Railways magazine, I would like to extend an exclusive one time only subscription offer to you and to the members of your club. Your members can save \$5.00 off the 1-year rate, \$9.00 on our 2-year rate, and more than \$13.00 with our special 3-year rate! This offer applies to both new subscriptions and renewals.

Enclosed you will find a Guidelines and Agreement Form, along with a subscription form that describes how you and the members of your club can subscribe to *Garden Railways* – and save while doing so.

Don't delay! Please mail your materials and your payment by August 1, 2013. Payment must be included with all orders. An envelope is enclosed for your convenience, or mail directly to:

Kalmbach publishing company

P. O. Box 1612

Waukesha, WI 53187 – 1612

In order for us to take advantage of this deal I will need the following information from every one who would like to extend their subscription.

Name, address, city state and zip code,

E-mail address,

whether you want to extend for one two or three years,

The customer number from your magazine mailing label

Please send this to me ASAP by email to

[nbuchholz@greatscalemodels.com](mailto:nbuchholz@greatscalemodels.com)

I will coordinate with Ruth Taylor to get the check written and the information sent before August 1.

In order for this to work we will need your information by July24,

## Tucson Botanical Gardens Layout Cleanup

A dedicated group of volunteers braved the 0700 streets of Tucson on June 18, to assist in the cleanup and maintenance of the TBG Garden Railroad. Led by Gary we swept track,



cleaned rolling stock



and buildings



re-aligned and re-ballasted track



and leveled track in preparation for gluing the ballast in place. In fact, our efforts brought our past president to his knees



## TBG Train Maintenance Committee

You probably already saw Gary's Email but just in case here it is again

Members,

I am starting up, once again, the maintenance committee for the Tucson Botanical Garden G gauge train display. The committee will meet the last Saturday of each month, at 7:00 AM, in the summer, and 10:00 in the winter. The group will make any necessary clean up and repairs required.

The first maintenance schedule will be Saturday, July 27th. If you are interested in being part of this group, please contact me by phone or email.

Thanks,

Gary

Gary's Phone: 520 299 7428

Email: [pgmartin5@hotmail.com](mailto:pgmartin5@hotmail.com)



# TGRS Minutes of the Board of Directors' Meeting

June 13, 2013 at the Home of Norm and Ibbly Ulmer

Members present were: Willis Fagg, Ruth Taylor, Pat Somerhalder, Norm Ulmer, Nick Buchholz, Gary and Peggy Martin, Glenn Mitchell, Bob Conrad, Chuck and Debbie Cook, Larry Erb, and Barry and Gina Blackwell. The Ulmers were thanked for hosting the meeting.

The minutes of the May Board of Directors' meeting were approved as published in the newsletter.

The Treasurer's Report was approved as read. (See June General Meeting minutes for report.)

Vice-President's Report: The Toy Train Swap Meet of 05/31 and 06/01 went well although attendance was poor. There was a good vendor turnout.

The Editor's Report: No report as Jim Miller was absent. He has requested that Nick Buchholz take over as of the June Newsletter.

## Committee Reports

Clinics: No report. Gary Martin proposed having a tent city-making clinic, a new town clinic and possibly a clinic on ballasting.

Education: Nothing new to report.

Maintenance: Nothing to repair. Two cars for the Rodeo Parade Museum are ready. He has placed the equipment removed from the TMC layout in the storage unit.

Membership/Website: No report; the chair was absent. Per Ruth Taylor, there are 93 members.

Mentor: Nothing new to report.

Social: There will be no social luncheon in June; July and August dates are pending.

## Old Business:

Norm reported that the TMC layout is now working fine with the one steam engine. The wiring was re-worked. Removal of some switches fixed the derail problems. The landscapers at TMC are walking on the track which is creating some problems.

There are no new updates on the Rodeo Parade Museum layout, but it still needs town buildings. Gary made one tent and will explore making kits that could be assembled in a clinic setting. Nick offered to make wooden frames. Barry has a tent that Madelyn Cook made that could be used as a model as well for the 10-12 needed for the proposed tent city.

The Children's Museum and the Transportation Museum layouts are working very well.

There were no new issues regarding the 2013 Rails in the Garden (RITG).

The New Town module is on hold. There is a 20' x 40' storage unit/garage that rents for \$500/month. This has potential for short-term workshop space and will be explored further.

The date for the picnic at McCormick-Stillman Railroad Park is October 19 in lieu of a general meeting. Thirty-eight are signed up so far. Willis is looking into chartering a bus and will present options at the General Meeting.

## New Business:

Dates are entered in the club calendar through June, 2014. The Board Meetings will take place at the Martins' home on the 2nd Thursdays and the General Meetings for 2013-14 are currently scheduled as follows:

September, January, June (open)

October 19 – McCormick-Stillman Railroad Park

November – Martins'

December – holiday luncheon; awards presentations

February – Rincon Country West (tentative)

March – Blackwells'

May – Tucson Botanical Gardens (tentative)

The ABTO tour in Phoenix is scheduled for November 2. Members are encouraged to carpool to the layouts. More information will follow in the coming months.

Chuck Cook has offered to help set up tour packets if none are forthcoming from ABTO.

The rental renewal on the storage unit is coming due. The Board agreed to a 12-month renewal.

The date for the VA layout is pending due to Christmas and New Year's falling on Wednesday. Willis will send a proposal to Pepe Mendoza at the VA to set up on 12/26, run Friday 12/27 and Monday 12/30 with tear-down on Tuesday, 12/31.

We have been asked to participate in the Diamond Children Center's "Christmas in August" program on August 20 or 21. We would set up the children's layout with a Christmas or possibly a circus theme. More information will follow.

Chuck Cook reported that the Rails in the Garden Tour 2014 will be March 8 and 9 on the east side of town. The U of A Book Festival takes place one week later. The ticket price will remain the same. The layouts currently scheduled are the Martins, Faggs, and Blackwells with possibly the Botanical Gardens.

Gary Martin reported that he met with the Botanical Gardens administration regarding mutual responsibilities for the layout maintenance. The engines are property of the TGRS and are on loan to the Gardens. No one except an authorized TGRS club member is to do any repair work on them. The roadbed needs to be re-done and the track needs ballasting. He will ask for a crew of at least 6 to sign up at the General Meeting. He will also ask for volunteers to run trains on the Gardens' Thursday night events from 4-7 pm. He also learned that volunteers should always check in at the desk in the gift shop. There is a new Children's Garden in the planning stages that may include a new train layout.

The next General Meeting is to be at the Forgues home on June 15.

The next Board Meeting is September 12 at the Martins' home (Nick Buchholz to bring the cookies).

There being no further business to come before the Board, the meeting was adjourned.

Respectfully submitted,  
**Gina Blackwell**

## TGRS Minutes Of The General Meeting June 15, 2013

The meeting was called to order by the President, Wilis Fagg, at 10 AM at the Jack and Rosalie Forgues residence. There were approximately 32 attendees present.

Jack and Rosalie were thanked for hosting. There were no new members present. Pat Somerhalder's daughter Nancy and grandson Kyle were guests.

The minutes of the May 2013 General Meeting were approved as published in the Newsletter.

The Treasurer's Report was approved as read by Ruth Taylor.

Total on deposit: \$26,859.

Revenues from 05/19/13: \$660.

Expenses from 05/19/13: \$255.

Net revenues from 05/19/13: \$405.

Total dues paid 2012-13: \$2,848.

Total dues paid to date 2013-14: \$902.

### Vice-President's Report:

Pat Somerhalder thanked everyone for their help and support the past 2 years. She reported that the Toy Train Swap Meet of 5/31-06/01 went well.

### Editor's Report:

Jim Miller asked members to be sure to send all future articles and pictures to Nick Buchholz as the new Editor.

### Committee Reports:

Clinics: No report.

Education: Nothing new.

Maintenance: All repairs are made except for two cars. Gary reported that after receiving complaints about the condition of the Botanical Gardens layout he investigated and found that the entire layout needs cleaning and the track needs major repairs. There are two new engines now "on loan" to the Gardens with any repairs to be made only by TGRS authorized members. He brought a sign-up sheet for a work crew scheduled for Tuesday, June 18 at 7 AM. There will also be some night-time events at the Gardens that could include club members running the layout and being available for questions from visitor and to promote the Rails in the Garden tour. These evenings include a 4th of July picnic and every 3rd Thursday twilight runs from 4-7 pm. Sign-up sheets were made available for each event. He asked that any volunteers to the Gardens check in at the gift shop prior to reporting to the layout. There is also a Children's Garden in the planning stages that may include a new train layout.

Membership/Website: Jerry Tulino reported that we now have 93 member families, although there has been

some difficulty in contacting the newest member family to confirm their information. The website calendar has been updated.

Mentor: Nothing new.

Social: No social event in June. July's event is pending. The Rails in the Garden Tour 2014 will be 03/08 and 03/09 on the east side. The Faggs, Martins and Blackwells are currently signed up. Chuck Cook also thanked the outgoing Board members for their service.

### Old Business:

Norm reported that the TMC layout is working well with one steam engine with sound.

The Rodeo Parade Museum layout needs buildings. It is hoped that it will be completed prior to next winter's re-opening. A clinic to build a tent city has been proposed. Gary Martin is working on kits for the tents. Please contact Gary if you are interested in participating.

All was well at the Diamond Children's Center at last check.

In lieu of an October meeting, we are planning a picnic excursion to the McCormick-Stillman Railroad Park in Scottsdale on the 19th of October. We are looking into chartering a bus and keeping the cost to about \$20 per person. If seats are available, we may offer them to other clubs in order to keep the cost down. Members were asked to please sign up as soon as possible so that plans can be made well in advance. A signup sheet was made available.

### New Business:

A host for the September meeting is needed.

The ABTO tour of Phoenix area layouts is scheduled for 11/02. Members are encouraged to carpool. The time is to be determined.

The VA layout is proposed for setup on 12/26, run 12/27 and 12/30 with run and tear-down on 12/31. We are waiting for a response from the VA.

The Diamond Children's Center has invited us to participate in their "Christmas in Summer" event for those children who may not see another winter. This would involve setting up the children's layout with a Christmas theme. The general membership indicated a willingness to be involved in the project.

Ron Koehler is willing to host a meeting and possibly a workshop on live steam. This is tentatively set for January.

The winter swap meet is set for January 10 and 11.

The next general meeting is tentatively scheduled for September 21 – a host is needed. The Board will meet on September 12 at the Martin residence.

There being no further business to discuss, the meeting was adjourned.

Respectfully submitted,

**Gina Blackwell**

# Electric Mules on the Panama Canal

By Dick Izen

Jeanne and I recently transited through the Panama Canal and I thought the members might be interested in learning about the electric locomotives (called Mules) used to help ships through the canal's six locks.



One of the modern “electric mules” used to help ships through the Panama Canal Locks. Note the two cables running from the mule’s side to tie off on the ship. This mule is on the right side of the lock and tied off to the ship with which we were sharing the lock.

The center cab mules provide the driver or engineer with good overall visibility. They operate with electricity from a buried Cable and use a cog railway system. Each mule weighs about 30 tons and generally four mules are used on each ship, one on either side at the bow and again at the stern. The largest ships may have six mules assigned, three on each side.



Mule on the other side of the lock. Note the numbers which indicate that the mule is about 300 feet from the rear of the lock and 750 feet from the front. These numbers, repeated every 50 feet along the length of the lock, help the pilots position the ships properly.

Although the canal allows ships to cross from the Atlantic to the Pacific it is actually a fresh water canal fed by the Chagres River. This river was dammed to control flooding along the canal's route and formed Gatun Lake which is 85 feet above mean sea level. Water allowed to escape from this lake is used to raise the ships. Currently lowering ships means allowing the water to escape into the oceans.



This view shows the cog railway and the two track rails for the mules. The narrow slit at the left is the slot used to obtain power from the buried power lines. Note the double swing gates holding water in the chamber.

There are three lock chambers on either side of Gatun Lake. On the Pacific side the double chamber Miraflores lock and the single chamber Pedro Miguel lock raise ships to lake level or lower them to the Pacific. At the other end the triple chamber Gatun locks raise or lower ships between the lake and the Atlantic (actually the Caribbean Sea which, of course opens to the Atlantic).



This view is from the middle lock chamber at Gatun Locks. Note how steeply the railroad descends to the top of the next chamber. The white buildings with blue lower portions are part of the extensive mule maintenance facilities.



The canal schedules ships from either end to be raised in the morning and then, after they transit Culebra Cut (the narrowest part of the canal itself) and Gatun Lake they are scheduled to be lowered at the opposite end from noon to nightfall. Currently the locks are 1000 feet long and 110 feet wide. Ships are limited to a maximum of 965 feet long by 106 feet wide. This is called the Panamax dimension and many ships have been built with this restriction in mind. That includes our most modern (WW II) battleships and WW II aircraft carriers.



At Gatun Locks a retired lock gate opening mechanism is on display



As can be seen above the current ships allow very little clearance from the current locks. The railing at the bottom of the picture is on the bow of the boat we were on and which was sharing the lock with the "Curacao Pearl".

Panama is in the process of expanding the canal with new locks that will be 1400 feet long and 180 feet wide. The current plan is to accept ships up to 1200 feet in length and 160 feet wide. As you can see the new plans allow much greater clearance than the current operations. Also of interest is that the new locks will use rolling gates instead of the current swing gates. The new gates will operate much like a pocket door in your house and will allow for maintenance without having to remove the gates

as is done with the current swing gates. The new locks will also have water retention basins to reduce the amount of fresh water lost from the canal. Despite their greater size, the engineers calculate that the new locks will use 7% less water than the current ones.



Now retired, the original 1914 mules had a double cab and were built by General Electric. Compare that to the modern high viability center cab version, Japanese built mule below.



## Tucson Rodeo Parade Tent city

Gary and Nick are working on a project to build a tent city for the Tucson Rodeo Parade Museum our plan is to make up Tent Kits and hold a clinic so that members can build a tent and add it to the layout.

There are three sizes of kits, the smallest is about 6' by 7', the medium size is 14' by 16' and a large size is 16' by 30'. We are planning about a dozen small tents, 4 to 6 medium tents and two or three large tents.

Sometime in August we will get together to build the tents. We should have all the materials required available at the time we build the tents.

If members would like to purchase tent kits, Nick will be able to create extras for them the cost will be \$5.00 for a small kit, \$8.00 for a medium kit and \$12.00 for a large

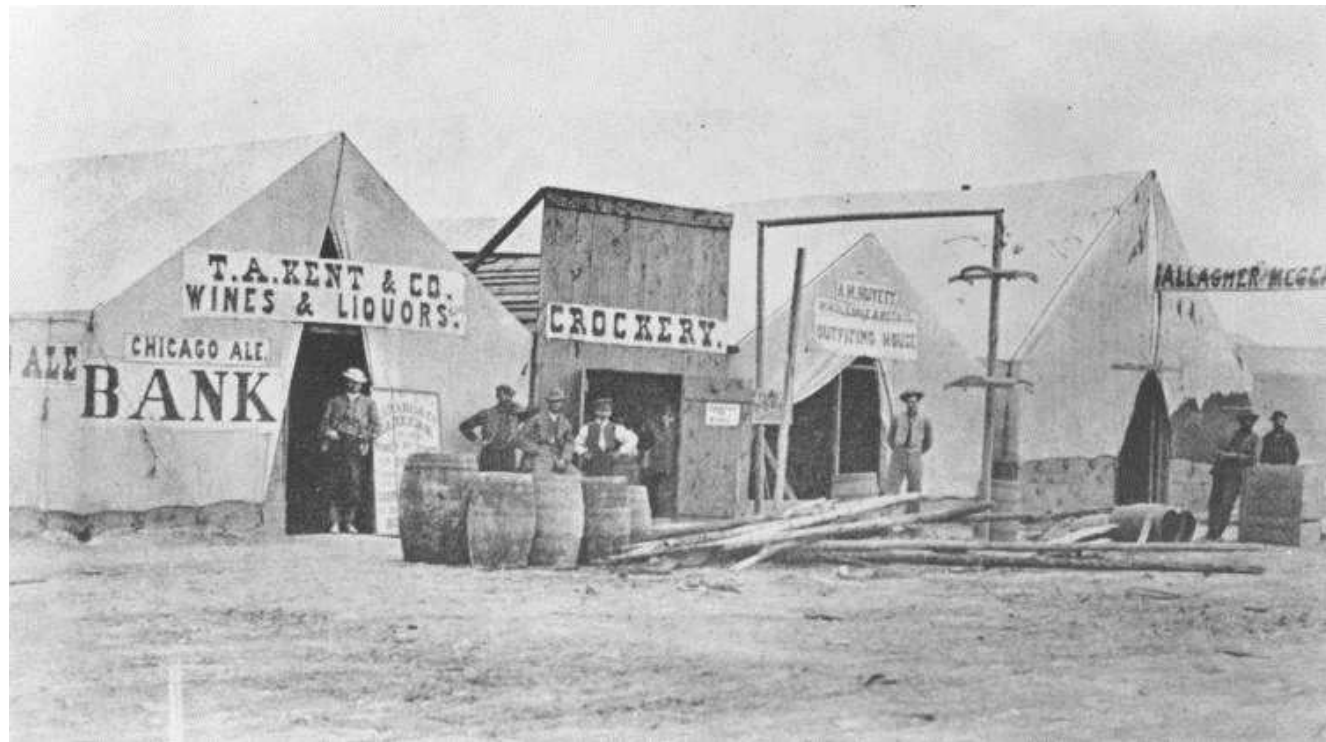
kit. These kits are designed for temporary placement outside and won't stand up well to the weather. Later, Nick hopes to develop weather resistant version for a slightly higher cost.



Here is what a small tent looks like used for housing



Here's a medium tent used for cook tents, Post offices or hospitals



Some examples of large tents used as dining halls, stores, bars and banks. Notice these tents are as big or bigger than the wooden Crockery Store building between them  
We'll keep you informed about when a where the Clinic will take place

This column unfortunately left mostly blank,

Send me content people or I'll be forced to start publishing "The History of the Tucson, Piedmont & Sonoran Desert Railroad" a detailed history in 40 extremely boring volumes

The Tucson Garden Railway Society is a non-profit corporation incorporated in Pima County, Arizona. Society members are interested in all areas of garden and modular large scale railroading. We welcome new members and hope you will consider joining. Members help each other build layouts and learn about railroading and modeling. The TGRS dues are \$30.00 per year and are due on June 30th of each year. For new members dues are pro-rated at \$2.50 per month remaining in the year until June 30th, the

first year. Additional name badges cost \$1.00 for each badge after the first.

If you are interested in the TGRS please contact one of the officers at the e-mails listed below. If you wish to join immediately, send a check and your name, address and telephone number and the names for any additional badges to:

Jerry Tulino  
6911 E. Baker St.  
Tucson, AZ 85710

## Calendar

**Thursday, July 4, 2013**

Tucson Botanical Garden July 4 Picnic 4PM to 7PM

**Tuesday, August 20, 2013**

Children's Display-Diamond Children's Hospital

**Thursday, September 12, 2013**

Board Meeting-Martins

**Saturday, September 21, 2013**

General Meeting-Carmichael

**Thursday, October 10, 2013**

Board Meeting-Martins

**Saturday, October 19, 2013**

:McCormic-Stillman Railroad Park Trip , Phoenix

**Saturday, November 2, 2013**

ABTO Tour-Phoenix

### **TGRS Officers and Board of Directors**

President: Gary Martin - [president@tucsongrs.org](mailto:president@tucsongrs.org)

V-President: Willis Fagg - [vicepresident@tucsongrs.org](mailto:vicepresident@tucsongrs.org)

Secretary: Pat Sommerhalder - [secretary@tucsongrs.org](mailto:secretary@tucsongrs.org)

Treasurer: Ruth Taylor - [treasurer@tucsongrs.org](mailto:treasurer@tucsongrs.org)

Editor: Nick Buchholz - [editor@tucsongrs.org](mailto:editor@tucsongrs.org)

At Large Board Members:

Bob Conrad - [memberatlarge1@tucsongrs.org](mailto:memberatlarge1@tucsongrs.org)

Larry Erb - [memberatlarge2@tucsongrs.org](mailto:memberatlarge2@tucsongrs.org)

Jack Forgues - [memberatlarge3@tucsongrs.org](mailto:memberatlarge3@tucsongrs.org)

Norm Ulmer - [memberatlarge4@tucsongrs.org](mailto:memberatlarge4@tucsongrs.org)

TGRS WebSite: [TucsonGRS.org](http://TucsonGRS.org)

Contact: [webmaster@tucsongrs.org](mailto:webmaster@tucsongrs.org)

TGRS c/o Nick C Buchholz  
3401 West Blacksill Dr.  
Tucson, AZ 85741-1419