



Shoaff's Mill, Little Buffalo State Park, Perry County, PA

SPOOM

Mid-Atlantic Chapter

Spring 2013



View From the Headrace

By Bob McLaughlin

I have been working on a new incentive for groups to host a meeting. For any group that hosts a meeting I will supply a map of their county with all the gristmill sites marked on it in a 2 by 3 foot poster format on 24 lb. paper. That is if I can find the mill locations. I have about exhausted my supply of information and am having a hard time finding information for the southern counties of Virginia. Anyone with information that may help in our project to locate mill sites please contact me so we can get it included in this project.

I am very excited about the Pasto Ag Museum Project. This is an excellent opportunity for the Chapter to get some publicity in front of a large audience. Anyone who has ideas on displays either posters or hands on exhibits please share them. They are also seeking a small hand operated mill with stones to use in the display.

I'd like for us to develop some educational material to promote National Milling Days, perhaps a poster on Oliver Evans improvements that automated the flour milling process. These materials could them be shared with member mills and displayed on National Milling Days. Any suggestions would be appreciated.

April 2013 Meeting

Bob McLaughlin



Bernheisel Mill



Bernheisel Mill interior

The first event of this gathering was a “meet and greet” dinner at the Pizza Grille in Carlisle, PA, Thursday evening. About 20 of us got together for dinner and conversation.

Friday morning 36 of us met at the Little Buffalo State Park office to load onto the bus for a day of mill touring. The first stop was Bernheisel Mill. This mill has a lot of the machinery but needs some tender loving care. The second stop was Waggoners Mill. This mill has some machinery. The owners have done some restoration and the building and dam are in good shape. This mill had an unusual powertrain as there were 2 waterwheels in the basement and it looked like they were in series, that is, the water from the first wheel would exit under the second wheel. After that we stopped at one of the first churches in the area and then on to lunch at a small park. After a fine box lunch we went to the Wentzel Bros. Mill. This mill is still a business but no longer grinds its own flour. They do roast peanuts and corn to grind into roasted corn meal which they sell at the store there.

The next stop was a drive by of Gibsons Mill. Gary Eby, our tour guide, gave us the history of this mill as we stayed on the bus. After a short stop in Bloomfield, we were back at the park to end the tour. Many thanks to Gary and Dave Eby for their interesting and informative talks on the trip. Afterwards some went on to Heishmans Mill on the way back to the motel.

Saturday was the meeting and a tour of Shoaffs Mill at the Park. Ben Ranney our host ran the mill for us and ground some corn. After lunch was a talk on the Juniata Division of the Pennsylvania Canal in Perry County by Dennis Hocker.

April 2013 Meeting (cont.)

Bob McLaughlin



Waggoner Mill



Waggoner Mill Interior



Wentzels Mill



Mr. Wentzel answers questions in the peanut/corn meal section of the mill

Minutes of April 2013 Meeting

Judy Grove

Mid-Atlantic Chapter

April 6, 2013

Society for the Preservation of Old Mills

Semiannual Meeting

Location: Little Buffalo State Park Office

Home of Shoaff's Mill

1579 State Park Road

Newport PA 17074

Attendees: See Attachment A

President Bob McLaughlin opened the business meeting at 9:30 AM. Minutes of the August 2012 meeting hosted by Double Mills in Mardela Springs MD were approved as distributed. The balance in the treasury is \$6,240.06. This amount reflects deposits of \$1902.15 and expenses of \$119.85 to Face Websites, \$847.54 to Double Mills Inc. and \$27.40 to Judy Grove for postage.

As of April 4, 2013 memberships include 40 individual (\$10), 11 sustaining memberships (\$25), and 4 organizational memberships (\$50) paid in 2013. Three additional organizational memberships are still in effect, since these run for 12 months rather than on the calendar year.

SPOOM Mid-Atlantic Newsletter: Susan Langley has resigned as editor due to work commitments. Anyone interested in assuming this responsibility should contact Bob McLaughlin Rlm101@verizon.net He will prepare one or two newsletters until an editor is found.

Chapter Impact Report: Judy Grove (See Attachment B)

Many requests are made via our website page and individual members which are forwarded to board members or the general membership for their responses. Sample requests received for the first three months of 2013 are included here.

Watershed Map Project: Bob Lundegard reported that over 400 mills in the Potomac and Shenandoah watersheds are entered into the mill database which can be viewed at <http://107.22.218.139/nvccgis>. Friends of Colvin Run Mill are exploring a system for processing updated data and photographs submitted by viewers. There has been slow progress on the addition of York County mills to the database.

Minutes of April 2013 Meeting (cont.)

Judy Grove

Online Millsite Application: Bob McLaughlin presented a map of Perry County Mills to Ben Ranney which he prepared from the www.historicmapworks.com site. Jim Miller's www.millpictures.com is another valuable resource.

2013 Mid-Atlantic Milling Days on June 15 and 16: Suggestions of activities, resources, and sample publicity materials for use by participating mills are posted on at www.spoommidatlantic.org. Print-ready announcements of events may be sent to judygrove@verizon.net for posting. Bob McLaughlin has prepared an Oliver Evans poster which may be locally printed. Contact him to request this on a CD. Partnering with other local mills or related organizations for joint publicity has worked for several groups. A coupon for mutual discounts when attending multiple sites on the same tour was suggested.

2013-14 Board of Directors: According to our bylaws, directors are appointed by and serve at the direction of the elected officers. The current list of directors will be updated in the next few weeks and presented to the membership. (See Attachment C for list of directors approved by the board following the chapter meeting.)

Pasto Agricultural Museum Project: Our chapter was invited to assist with the preparation of an exhibit on milling for the museum in exchange for acknowledgement of our contributions and the opportunity to display our rack cards. The museum receives over 7000 visitors a year, many during their Ag Progress Days the third week of August. Suggested contacts were Charles Yeske for bread making demonstration, Voith Hydro as successor to Fitz Waterwheel Co, Rollie Anderson of Greencastle for his working scale mill model, and Hagley Museum and Eden Mill MD for 3-D models. Bob M is coordinating our participation in the project.

Tribute to Founding Members: Ivan Lufriu reported on the passing in October 2012 of Chuck Ives, first president of the chapter, and paid tribute to his efforts in the establishment of the chapter and writing of the bylaws. Bob Lundegard, founding member and second president, who has been a leader, mentor, and invaluable repository of knowledge was also recognized for his contributions to the success of our chapter.

Upcoming Chapter Meetings:

August 23-24 Kemps Mill in Williamsport MD (owner: Richard Nye) during C & O Canal Days Celebration. Check out the Williamsport, Maryland town website <http://williamsportmd.gov> for information on the area.

Spring 2014 Meeting – no date or host selected at this point

October 3-5, 2014 Brenneman Turner Mill near Harrisonburg VA (contact: Ken Weaver) The only surviving grist mill in Rockingham County VA which is fully equipped. On October 6 1864 Union soldiers set it on fire during General Sheridan's attempt to destroy the 'Breadbasket of the Confederacy'. This will be reenacted as part of the Civil War Sesquicentennial. For more info on the Mill, check our web site at www.vbmhc.org/btmill

Minutes of April 2013 Meeting (cont.)

Judy Grove

SPOOM Mill Lists: Steve Spring reported that up to five copies of mill lists are now available free as PDF's to SPOOM members with membership number or nonmembers with contact information. In return, visitors are asked to submit any corrections and updates to mill information to millfoto@aol.com using the mill list form.

Other Announcements

Mid-Atlantic Chapter Report in *Old Mill News*: Vice President Jon Joyce sends a quarterly chapter report. Send information on events of general interest to jonjoyce@msn.com by the May 1 deadline. Pictures may be sent to Steve Spring at millfoto@aol.com.

Bowmansville Mill open Saturday April 13 from noon to 4 pm: The address is 136 Voneida Street, Narvon PA, but the mill is actually located in Bowmansville at the intersection of Rt 625 and Voneida Street. Questions? Contact Ron or Nancy at 717-445-0111.

Tall Ships Returning to Erie: September 5 through 9 will celebrate the bicentennial of the building of Commodore Perry's fleet in Erie PA and his victory at the Battle of Lake Erie on September 10th. Visit <http://tallshipserie.com/> for more information.

Respectfully submitted,

Judith Grove, Secretary

717-741-4366

JudyGrove@Verizon.net

Chapter Member Contact Information: A few days prior to the event names of attendees will be sent by Email to those who pre-registered. Contact information for individuals may be requested from the secretary when needed. Information related to milling topics or events may be submitted to the secretary for distribution via Email alerts upon approval by the board.

Minutes of April 2013 Meeting (cont.)

Judy Grove

Chapter Meeting Attendees - April 6, 2013 Attachment A

Diane McLaughlin	Howard PA
Robert McLaughlin	Howard PA
Bob Carbaugh	Elizabethtown PA
Bob Kinsey	Elizabethtown PA
Ray Kinard	York PA
Terry "Cotton" Koller	York PA
Judy Grove	Dover PA
Rudolph Hershey	Dover PA
Ivan Lufriu	Littlestown PA
Marlene Lufriu	Littlestown PA
Craig Sansonetti	Gaithersburg MD
David Bronson	Benton PA
Linda Bronson	Benton PA
Bruce Gilbert	Springfield VA
Dan Campbell	West Chester PA
Nick Yannarell	Springfield VA
Robert Lundegard	Great Falls VA
Marjorie Lundegard	Great Falls VA
Ken Weaver	Harrisonburg VA
Don Wallace	Bluemont VA
Nate Bond	Fredericksburg VA
Ben Ranney	Woodward PA
Wayne H Spyker	Stewartstown PA
Karen Wagner	North East PA
Chas Wagner	North East PA

Minutes of April 2013 Meeting (cont.)

Judy Grove

Chapter Impact Report Attachment B

Sample requests received via website or personal contacts and submitted to board members or general membership for advice and assistance from January to March, 2013

Brian Hagy – photos of Mather Mill for an upcoming book (general membership)

John Taubeneck – information on mills near Bowling Green VA (Steve Spring, Marge Lundegard)

Bill Austin – stone crane parts for the mill he is building at Discovery Park of America in Union City PA (Chuck Yeske)

Jim Hebin – help to set up a 5013c for a historic grist mill (Bob Lundgard, Nick Yannarell)

Charles Yeske – articles for TIMS International publication

Dennis Slocum – contact person at Poplar Grove Tide Mill (Judy Grove)

Frank Ierardi – information on Seneca Creek Mills in Montgomery County MD (Steve Spring)

Milling Display for Agricultural Museum at Penn State (Bob McLaughlin, Ivan Lufriu, Charles Yeske, and others)

Reporter via Mason Maddox – information on Veterans Association Grist Mill in MD (Steve Spring)

Beth DeFrancisco – research on Arlingto/Barcroft Mill built by George Washington Parke Custis (Lundegards, Steve Spring) Beth joined the chapter and attended today's meeting as well.

David Story – offer of VA mill photos for our use

Jarrett Stein – Philadelphia High School teacher wants source for grains for student granola business (Steve Spring supplied name of grain broker in the area within ten minutes of posting)

Brian Hagey – What are “threshing oats” (Ivan Lufriu)

Greg Nixon - Rocky Ford Mill Equipment Available (inventoried by Ben Hassett and posted to website)

Chapter Board of Directors 2013-2014 Attachment C

Ivan Lufriu

Steve Spring

Marlene Lufriu

Craig Sansonetti

Adam Sieminski

Dan Campbell

Nick Yannarell

Susan Langley

Charles Yeske

Breneman-Turner Mill, Harrisonburg, VA

By Ken Weaver



Progress is being made on the preservation of this ca 1800 mill. The above picture shows the mill with the deteriorating section which was ready to crumble. To see pictures of the process of removing and rebuilding a large section without losing the rest of the wall, see WWW.VBMHC.org and click on Mill.



Later we had a surprise. Part of the bridge which supported the old gravel road which passes over the tail race, collapsed and allowed gravel and soil to fill the tail race. The nature of the bridge could not be seen until we excavated above it, and found large flat lime stones laid across the stone walls of the sides of the tail race.

The problem was that one of the stones, 6'x 8' weighing about 8,000 pounds, had broken and one end dropped into the race. Note in the picture that, at some time, logs had been added to the ends of the bridge to widen the road.

James Madison University historians reported that the bridge was a historic site which should be preserved. Visitors to the Mill need to cross the race and farm equipment needed a vehicle bridge to access adjacent fields.

To achieve this we built support for the broken stone and are building two bridges for traffic. They are separated with enough space for viewing the historic bridge.

Breneman-Turner Mill, Harrisonburg, VA (cont.)

Here are pictures of lifting and then replacing the 6,300 pound broken piece. A concrete pier was built in the race to support the broken end of the stone. Also a view of the 'repaired bridge'. The abutments for the vehicle bridge are in place but the bridge is not yet been installed.



Civil War Sesquicentennial Celebrations

This Mill is one that was saved, after being set on fire by Union Forces during the “Burning “of the Valley in 1864. Gen Sheridan’s goal was to destroy the Breadbasket of the Confederacy, to the extent that “a crow flying over the Valley would need to carry its own lunch”.

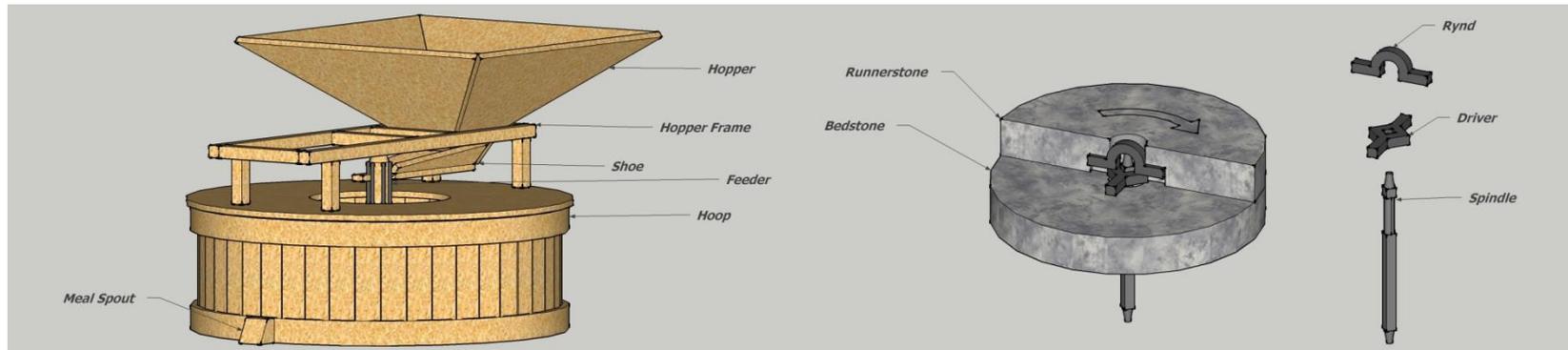
This Mill is now listed as a Civil War Trail Site which is bringing out of town and state visitors. From May through October we are open for tours on one Saturday each month.

Pasto Agricultural Museum

By Bob McLaughlin

The College of Agricultural Sciences at Penn State maintains this museum that tells the history of agriculture. They have an extensive collection of antique farm implements that tell the story of farming from planting to harvesting. They are seeking to expand their small grains display to include the processing of grain into baked goods.

I have been working with them to create display items that tell the story of milling the grain into flour or meal. 7000 people go through the museum each year, most during their AG Progress Days event held in August. This years dates are August 13 through 15.



National Milling Days

Every year we declare a couple of days as National Milling Days to help educate the public about the importance of the flour milling industry in Colonial America. We are looking to work with mills open to the public to develop educational materials that help tell that story. This year it is Friday June 15th and Saturday June 16th. (cont. next page.)

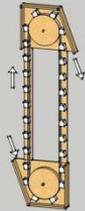
National Milling Days (cont.)

Below is an example of a possible poster.



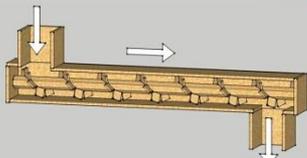
Oliver Evans, 1755-1819

Inventor of 5 improvements to automate the flour milling process



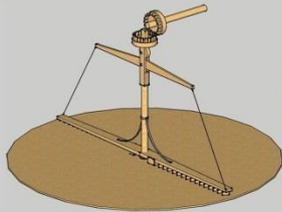
The Elevator

The Elevator used an endless belt with cups to move material vertically.



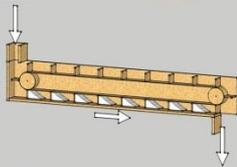
The Conveyer

The Conveyer moved material horizontally with a shaft with paddles called flights that were set in a spiral.



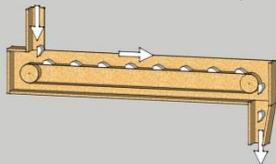
The Hopper Boy

The Hopper Boy raked flour in a circle to cool it and break up any lumps. It replaced the boys who used rakes to do this by hand.



The Drill

The Drill moved material horizontally with paddles on an endless belt.



The Descender

The Descender moved material horizontally and downward on an endless belt by the weight of the material alone.

The Millwrights Corner

Bob McLaughlin

Ever wonder how much power it takes to run a set of millstones? Well I have so here goes.

Oliver Evans in his book "The Young Mill-wright and Miller's Guide" in Article 63, states: It takes 87.5 cubochs per second to produce 3.8 pounds of flour/meal per minute on 5 foot stones. He defines a cuboch as 1 cubic foot of water falling through 1 foot of height. (The cuboch never really caught on.) Since a cubic foot of water weighs 62.4 pounds that is equivalent to 62.4 foot-pounds per second. Since a horsepower is defined as 550 foot-pounds per second, 1 cuboch per second is equivalent to 0.113 horsepower, and 87.5 cubochs per second is equivalent to 9.93 horsepower.

The power required is directly proportional to the feed rate, or production rate, so if you want to produce 1 pound per minute the power required is $9.93 \times (1/3.8) = 2.61$ horsepower.

He also states that the production is proportional to the area of the stones. So 4 foot diameter stones would require $2.61 \times (4 \times 4 / 5 \times 5)$ or 1.67 horsepower to produce 1 pound per minute.

We can summarize this as the power required in horsepower is $0.104 \times (\text{Feed rate in pounds per minute}) \times (\text{Stone diameter in feet squared})$. Now I believe that the only place Oliver Evans had to measure the flow was at the wheel so this should be the gross horsepower, that is the power available at the wheel without regard to efficiency of the wheel.

If we compare this to what Tom Rich and his students at Bucknell University measured on 16 inch stones we find fairly good agreement. We would calculate on 16 inch stones (that is 1.33 feet) $0.104 \times 1 \times 1.33 \times 1.33$ or 0.184 hp. They measured .14 hp. Now their measurement was at the spindle so they would not have the loss of the wheel. If an overshot wheel had an efficiency of 76 % we would have good agreement. This is well within the possible range of an overshot waterwheel.

\$\$ MEMBERSHIP DUES \$\$

SPOOM Mid-Atlantic Memberships run on the calendar year. If you have not already paid your dues for the current year, please use the attached form to do so or pay online from the Membership page on our website, www.spoommidatlantic.org. Additional forms may be downloaded from our website. Payments for each year may be sent beginning January 1. Individual memberships are \$10 with current SPOOM membership or \$15 without. Sustaining Memberships of \$25 provide additional funds for the support of mill restoration efforts within the chapter. Organizational memberships are available for \$50 and provide sponsor listing on our website. Each membership provides the quarterly newsletter, information on mills and seminars, tax deductible dues, and invitations to mill tours and semi-annual meetings. Please submit your payment promptly so you can continue to enjoy your membership benefits. Encourage like-minded friends to consider joining as well. Also check out our website for more pictures and information.



Newsletter

Articles, photographs, and upcoming events are due to the newsletter editor by June 1st, 2013 for the next newsletter. Don't forget photo credits/captions. Please use Word documents and jpgs whenever possible as pdf's are very difficult to use. Also, please remember to let everyone know about Fall Fairs and Christmas Festivities, Craft Sales, Pancake Breakfasts and all the fun and fundraising activities out there, as well as all the news and events related to your mills or mills in your neighborhood. Email to: rlm101@verizon.net.



MEMBERSHIP SUBSCRIPTION FORM

Please enroll me as a member of the Mid-Atlantic Chapter of the Society for the Preservation Of Old Mills

Please Print

Name: _____

Milling Connection: _____

Address: _____

City: _____ State/Zip Code _____

Telephone Number _____ E-mail Address _____

(newsletters are emailed or posted in web site when possible to save postage)

New Subscription Renewal

Please Check One:

Individual, Member of SPOOM - \$10.00

Individual, Not Member of SPOOM - \$15.00

Sustaining Membership - \$25.00

Organization Membership - \$50.00

Please indicate level of membership and mail this form with your check or money order to

Membership Manager, 613 Green Valley Road, York PA 17403. Please make your checks out to Mid-Atlantic Chapter. Online membership payment is available through the membership page of our website www.spoommidatlantic.org as well. The Mid-Atlantic Chapter is a member in good standing of the Society for the Preservation of Old Mills and serves MD, DE, PA, VA, and DC.