

WOODWORKERS NEWS



Northeastern
Woodworkers
Association

July 2009, Vol. 18, Number 7

Family Picnic

Sunday, July 19, 2009, 11:00 am
Jonesville Fire Station No. 1
Main Street, Jonesville (Clifton Park)

By Karen Arkison

Hopefully by now our rain has simply made us more anxious to join in the fun of this year's NWA picnic!

One more time!! It's that time of year again. Winter is behind us, the days are getting longer and the temperature warmer. What better time to get together with old friends and to make new ones. That's right. It's time to plan for the NWA Picnic.



The Picnic will be held on Sunday, July 19th at the Jonesville Fire Department starting at 11:00 am. The price is \$6.00 for adults, children under 12 are free. Please bring a dessert to share.

Bring your finely tuned and sharpened hand plan for the Hand Plane Challenge, and your fastest tape measure for the Tape Measure Race. There will be door prizes for children and adults.

Calling all Flat Boarders, Turners, Carvers and Scrollers. This year's Creative Challenge is to make something out of a standard packing pallet. So get those ingenious minds going and surprise us. 🐾

Lumber and Tool Auction

By Charlie Goddard

The next lumber and tool auction is scheduled for September 26 in the Shaker barn. The doors will open at 10 AM to inspect the merchandise and the auction will begin at noon.

So far we have collected quite a bit of lumber - oak, ash, walnut, cherry, red maple, locust and a large amount of ambrosia silver maple. Also, we are getting 20 or more bundles of foreign exotics from Joshua's Trees. Each bundle will include 6 to 8 different woods. Joshua has been selling these on the Internet with some success.

We have very few tools so far. More have been promised but we really need some more. If you have woodworking tools to donate or to sell on a shared basis please contact Dick Flanders - rflander@nycap.rr.com, 518-393-5215 or Warren Stoker - wstoker@nycap.rr.com, 518-439-6089.

All donations are fully tax deductible. The money raised in the annual auction is used to fund grants from the Fiske Scholarship Fund to attend woodworking classes. 🐾

Good Bye Sam

By Kitty Scharl

The first time I was moved to write about Sam Maloof I had just returned from a class at his woodworking shop in Alta Loma, California. For some reason, a mystery to me at the time, after demonstrating the particularly unorthodox bandsaw shaping of one of his signature sculpted rocking chair arms, he had his assistant mount the arm and gave it to me. This touching gesture and the fact that I continually



look to his furniture for inspiration in my own woodworking has kept Sam frequently in my mind in the intervening years. Upon learning of his death, I find myself once

Continued on Page 4

OFFICERS

President - Owen Arkison
518 459-5348

owen.Arkison@earthlink.net

Vice President - Roger Holmes
roger.holmes@dewalt.com

Secretary - Kitty Scharl 765-3189
crowridge@nycap.rr.com

Treasurer - Austin Spang 393-2859
spang@nycap.rr.com

Past President - Warren Stoker 439-6089
wstoker@nycap.rr.com

Historian - Wayne Diston 674-4171
wdistin@nycap.rr.com

Executive Secretary - Charlie Goddard
370-0388 Cgodd@aol.com

CHAIRPERSONS

Mid-Hudson Chapter

Pete Chast, President - 945-1636
pchast@francomm.com

Sacadaga Chapter

Co-Chairpersons

Clyde Cheney - 661-5138

Ray Laubenstein - 863-6071

RLAUB@Roadrunner.com

Education

Herm Finkbeiner - 371-9145

hfinkbei@nycap.rr.com

Adult Programs

Position To Be Filled

Youth Programs

Ray Gannon - 664-2229

raymond.gannon@wildblue.net

Fiske Fund

Tom Osborne

TTomosborne@aol.com

Hospitality

Position To Be Filled

Library

Darrel Welch - 477-8431

ydwelch@fairpoint.net

Membership

Susan Howe - 885-9331

Programs

Ken Evans - 753-7759

kevans1@nycap.rr.com

Publications

Wally Carpenter - 434-1776

c.j.carpenter@earthlink.net

SHOWCASE

Ken Evans - 753-7759

kevans1@nycap.rr.com

Videographers

Dave Ellison - 872-0980

ellisd@rpi.edu

Hans Kappel - 861-8753

bluespruce@juno.com

Pat Pugsley - 634-7144

ideas@mhonline.net

Bob Conahan - 355-9032

conahanbob@hotmail.com

Kirk Hardenburg

725-1997

UNLESS OTHERWISE NOTED, PHONE
NUMBERS ARE IN AREA CODE 518

Veneering Workshop June 6, 2009

By Chuck Walker

A workshop featuring veneering techniques was held at the Opdahl Building by the Mid-Hudson Woodworkers. Al Shinker presented the main part extensively covering modern day techniques. Veneers, substrates, adhesives, presses, and other tools needed to apply veneers for decoration were shown and discussed. The ability of fine veneers as a cost effective means for dressing up wood was demonstrated with a display of beautifully figured veneers. Al then showed the step by step process of selecting and cutting veneer and if necessary, treating it so that it is flat and pliable. He then applied glue to a substrate and placed the veneer where it was intended to go. Finally, he discussed various techniques of veneer presses including vacuum presses. The use of cauls with mechanical presses was discussed to assure that when pressure is applied, it is from the center outward. This helps to remove air bubbles that might be trapped. Cauls can also be made in a curved shape to apply veneer to a curved surface such as a table apron or drawer. Making and applying decorative banding and stringing were also covered.

Chuck Walker provided a demonstration of hammer veneering using hot hide glue. Although this technique is not much in vogue nowadays it has a number of advantages for certain applications. For one, a large press is not needed as the pressure is applied by the "hammer" or more accurately a metal squeegee to force out air and extra glue before it sets. Once the glue has gelled it can be reactivated as necessary with a hot iron and a little moisture allowing removal of strips for inlaying other veneers for highlights or banding. Veneer can also be hammered onto curved surfaces if they are not too complex. Hide glue has another advantage in that if it should bleed through thin veneer and burls, it will take on the color and nature of the wood and final finish. This provided a nice contrast by looking into the past for comparison with more modern techniques.



Al Shinker holding a roller used to help apply pressure to the glue-up.



Al Shinker showing cauls and a simple press that uses "F" style clamps.



Bob Opdahl asks Chuck Walker a question about hammer veneering.

Attention Wood Carvers

By Ray Gannon

NWA Wood Carvers preferring to carve in the early evening now have a ground floor location with plenty of room in a fully operational modern wood working shop. Yes we are ready to carve and all you need to do is come on down to your new NWA Shop. Yes we now have a ground floor setting, where even I can make it into.

Location – Stillwater Community Ctr., on School Street in the village of Stillwater.

Time – 6 to 9 pm Tuesdays

Informal meeting -- you carve on your project or you can carve on one of many projects.

To start us off we'll be giving instructions on the following as you determine the priority.

Pattern Selection, A fully operational Library will be at your finger tips.

Wood best suited for your carving

Tool selection and care

Sharpening your carving tools

Making a Bench Hook

Dust control, making your own dust collection station. (Note: Tools that produce dust must have a dust collection method.) We can work this out individually.

Finishing your carving, including painting with various mediums.

Repairing carvings

Carving in the round

Relief Carving, Shallow, Pierced

Sign & Plaque construction

Bird Carving

You ask for it and we will give our all to assist

We are trying to fill a void for our NWA Woodcarvers that can't make the many wonderful day sessions, by offering an evening session.

When we carve in a group setting you'll complete more carvings You'll be learning constantly by joining in with the group chatter, talking through the many challenges that arise during the course of evening of carving.

We are in the start up phase come join in on the fun and share your concerns and thoughts. We need challenges. This is a group of many different people from latterly from all walks of life. We will make this a fun group and we can make a difference. Help shape this organization as you would like it.

Interested Guest of an NWA Member are most welcome as well. For more info please contact Ray Gannon at LoRayG@Gmail.com. Or phone 518-664-2229. 🐿

AWA News

By Celia Carpenter

Monthly Lecture

This month's lecturer was our own special Jan Panek. He shared many elements colorizing wood. This included using everything from cakes frosting dyes, acrylics, stains, oils, and general use paints. Jan had numerous examples which he shared with us helping to secure his procedure.

Many thanks to Jan for sharing what he has learned through his own experimentation over the years.

Next months' Lectures

July	Dave Jarose	Making a Turned Box
August	Tony Bararra	Candle Sticks
September	Beverly Carhart	Feathers
October	Stu Hodsoll	Pepper Mills
November	Ken Evans	Holiday Tree Ornaments
December	Warren Stoker	A Toy

WOODWORKERS NEWS is published by the Northeastern Woodworkers Association for its members. The Association's aim is to provide a common meeting ground for lovers of woodworking who want to know more about wood and the techniques for forming it. The newsletter is published monthly. It is assembled in QuarkXPress 5.0 on an iMac G5, duplicated by Shipmates, and mailed to more than 1,000 addresses.



Your next issue of **Woodworkers News** will be published in early August
Copy deadline: July 15
Wally Carpenter, Editor
(518) 434-1776
c.j.carpenter@earthlink.net
Elizabeth Keays Graphic Artist
Designer



WEBSITE(S)

www.woodworker.org

www.nwawoodworkingshow.org

Blog Site:

<http://woodworkerorg.blogspot.com/>

NWA maintains two websites, the first noted here operates continuously. We also offer selected links to other sites of interest to our membership.
Webmaster - Kurt Hertzog
kurt@kurthertzog.com

The second site operates from January 1 to May 30 and carries specific information about SHOWCASE.



**NORTHEASTERN
WOODWORKERS ASSOCIATION**
P.O. BOX 246
Rexford, New York 12148

Good Bye Sam

Continued from Cover

again with thoughts that need writing...

I can still vividly picture Sam's workshop and experience the sights and sounds around me on that day. How painfully empty it must feel now that his great creative energy is stilled. But by his own account, Sam had a full, rich, balanced life in which work gave rise to pleasure. And he had a soul-friend and constant companion—his wife Freda who he credits completely for the encouragement and opportunity to become a woodworker. Her death in 1998 after 50 years of marriage left him bereft.

Sam's habit of hard work and the prodigious energy it took continued into his nineties. In addition to enabling him to become an outstandingly successful furniture maker, his work ethic allowed him to live in a home and environment of original beauty almost entirely fabricated by his own hand and created from the glorious natural materials of his native California. He even carved every quirky and clever door latch from odd branches and scrap wood.

As I look at and contemplate it, the thing that strikes me most about Sam's furniture is that the design and joinery must have evolved together as he problem solved his way through the construction of his pieces. He stated that he was making a living making furniture, so the process required a straight forward practicality. His furniture does not appear to have been much influenced by past furniture styles or periods or by critics or movements. While many furniture makers in the 1970s eschewed function and made creative, but useless, chairs, Sam forged his own aesthetic and created timeless furniture that is deeply satisfying to look at and to use.



His most recognizable designs were his graceful rocking chairs with their elongated, slender rockers and his elegant tree root derived table bases. The very earliest of his pieces were angled and straight edged, but it wasn't long before edges and legs became rounded and finally his forms began to flow with sculpted curves and soft sensuality. In the end his pieces were works of art as well as of great craftsmanship.

His most notable original joinery techniques were those developed for joining chair legs to the seat. He also, unapologetically, used screws for strength, the plugs covering them incorporated as a design element. And, not surprisingly, he developed his own finish and exacting finishing process that gave depth, durability and quiet luster to the wood.

Generous of mind and spirit, like another twentieth century icon (and California native), Julia Child, Sam was willing and eager to share his methods and techniques in his books, classes and workshops. He was an advocate for the craftsman, encouraged woodworkers while alive and continues to do so in death through the Sam and Alfreda Maloof Foundation.

It took me a couple of years and a significant life experience to finally understand that Sam Maloof was moved to give me the rocking chair arm he had just shaped because I reminded him of his late wife Freda. Sadly, he had had to say good bye to her, and now we must say good bye to him. But what an inspiring legacy he leaves for all of us open to the inheritance. 🙏



Kaatskill Woodturners Association News

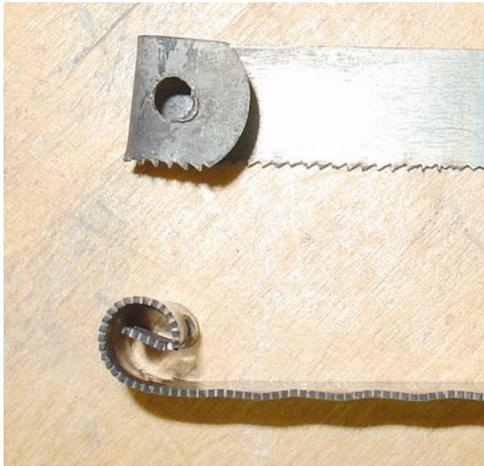
By Wally Cook

Captive Ring Tool-Heat Treat

Temper, temper: Chuck Walker demonstrated the process of working with steel to craft a captive ring tool. In the process of fabricating the tool, we covered the basics of heat treating tool steel.

There are four basic processes in preparing tool steel:

Annealing: The process of softening tool steel so it can be worked with other tools. It is achieved by heating until cherry red and allowing it to cool slowly. Usually, tool steel stock is received in an annealed or soft state.



Annealing resulted in softer hardness, allowing extreme bending

Hardening: The process of raising tool steel to its maximum hardness. It is achieved by heating until cherry red and quenching quickly in water or oil, depending on the type of steel.



Chuck used MAPP gas to heat the tool stock

Tempering: The process of lowering previously hardened steel to a more useful hardness. It is accomplished by raising the temperature of the metal in a controlled manner until it achieves a straw, bronze or blue color signifying the desired hardness.

Bluing: the process of coloring a piece of steel to a metallic blue surface color. It is accomplished by raising the temperature of the steel in a controlled manner. It is not necessary for the steel to be previously hardened, but it must be clean and polished.

Chuck demonstrated that the type of tool steel may be estimated by its characteristics when grinding. Carbon steel will show white sparks, the greater the carbon, the more voluminous the spark pattern. High Speed Steel will demonstrate a smaller pattern of red sparks.

In order to make a captive ring tool, the steel stock needed to be annealed and tempered. The annealing process allowed the stock to be ground and filed into the required shape (Chuck used round diamond file), while the tempering process hardened the steel to produce a sufficiently hard edge.

In both processes, carefully controlled heating is important. Heating can be accomplished in several ways – Chuck used MAPP gas canister and a heating element in his demonstration. If the mass of the steel varies (e.g., thins on the edge), then a heat sink may be required. Iron wire wrapped around the demonstration steel stock worked well to absorb excess heat from the thin edge, to assure a uniform treatment.

After heating, Chuck produced a slow quench for annealing by placing the steel stock in a can of perlite. We annealed a hacksaw blade in this manner. The resulting softness can be seen by the ability to curl the blade in the picture below. The same hacksaw blade stock, when quickly water cooled, was too brittle to bend.

Once the cutting profile of the intended tool is ground onto the steel blank, tempering can begin. The tool is reheated to the appropriate color; Chuck aimed for a uniform bronze color and then cooled in quenching oil. It should be noted that some steel is intended for oil quenching, while some is intended for water quenching. When quenching in oil, the oil must be heated first. Chuck indicated that peanut oil is a good substitute for quenching oil, but that motor oil may result in uneven boiling. For oil quenched steel, a table of hardness is listed below.

Tempering: Oil-Hardening Tool Steel

Oxidation Colors	Temperature (F)	Rockwell Hardness
As Quenched:		63-65
Faint Straw	400	61-62
Straw	440	60-61
Deep Straw	475	60
Bronze	520	59-60
Peacock	540	59
Purple	550	58-59
Full Blue	590	57-58
Light Blue	640	56-57

Table for heated color/hardness

CHAPTER NEWS

NWA Mid-Hudson Chapter News

By Wally Cook

PET: Don Muth and Bob Lawrence provided background on the Personal Energy Transportation (PET) vehicle. The PET is self propulsion tricycle intended for individuals who have lost the use of their legs. The PET is effective in rough terrain where wheelchairs simply cannot work.

Designed by Earl Minor, the PET is built from 1x6 and 2x2 pine or pressure treated wood, solid rubber tires, quality bearings, and machined metal parts. It weighs in at 87 pounds. Each element of the PET has to withstand adverse conditions, so the product has been modified with experience in the field (e.g., improved chain driven design and braking/steering configuration).

PET International is 501(c) 3 and the vehicles are shipped as medical supplies. Over three thousand PET's have been shipped to third world countries, where devastation resulting from land mines, polio, leprosy, diabetes, and occupational accidents has left individuals handicapped and poor. In Zambia alone, there are over 100,000 landmine victims. It costs \$250 to build and ship a PET, although Mercy ships will transport the product for free.

Don explained that several locations in the US manufacture the PET as a small cottage industry. The local manufacturing site is in East Jewett, NY. The East Jewett operation produces about 140 units, but production could double with additional volunteers. Woodworkers can assist by making various piece parts for assembly at East Jewett. For further information check www.petinternational.org/.



Don Muth and Bob Lawrence provided overview of PET



John Grossbohlin takes a PET for a spin while Pete Chast watches

BOCES Students Excited About New Woodworking Skills

By Ken Evans

Building Trades Students of the Washington Saratoga Warren Hamilton Essex BOCES and their instructor spent the day with members of the Northeastern Woodworkers Association to learn about the wood lathe and its use.

Nine members of the Northeastern Woodworkers Association (NWA) hosted eight BOCES students and their instructor at the NWA woodworking shop located in the Stillwater Community Center in Stillwater, NY. Each student learned about the wood lathe and how to use this machine to make beautiful wooden pens. After a short class related to the history of the lathe, its use today in making objects of art, and the safety issues involved in its use, each student and their instructor Mr. Art Erbe were guided through the process of making the components of a wooden pen. Each student, with individual instruction and guidance from an NWA member, completed two beautiful wooden pens.

Rightfully so, these students were proud of their accomplishment and of the pens they made. 🐿

CLASSIFIEDS

Bandsaw 12", Craftsman Model 113.24331, with motor and stand very good condition, \$ 150, phone: (518) 383-1848 or janpk@AOL.com

WOOD FOR OVAL BOX MAKERS Finding the best wood for your boxes can be a challenge. I am now selling the same quality material that I use. Quarter sawn Maple, Cherry, or walnut for bands and quarter sawn Eastern White Pine for tops and bottoms. Please call or email for a list. sgrassel@twcny.rr.com. Phone 315 455 5918.

Woodlathe Jet Jwl1236 \$599, Nova Chuck \$139, Dewalt Sliding Chop Saw 12 inch with stand \$423, 12 .5 inch Dewalt Planer with extra blades \$300, Jet Planer 15 inch JWP 15cs 3 HP extra blades \$855, Delta 8 inch Jointer extra blades \$912, Jet Drill Press JDP-17MF 3/4 HP \$342, Jet Band Saw 2HP JWB5 14cs \$600, Delta Sanding Center 4x48 belt 12 inch disk 4 inch pneumatic drum sander with dust collection \$787 Frank Wiley 279-9790.

Member Profile

Stan Rosenberg

By Ken Evans

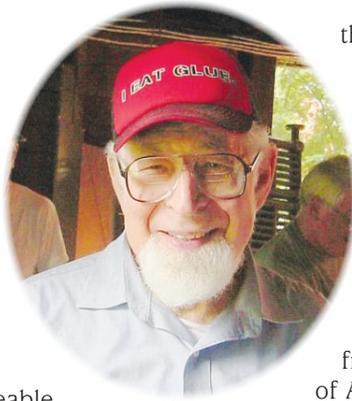
I was relatively new to NWA and I was acting as a floor host at an NWA Showcase event (then it was called EXPO) in Saratoga Springs, NY. We were each wearing our NWA aprons. He was engaging people in conversation with a smile that went ear to ear amidst a white beard. Somehow we got to chatting about things. It was easy to carry on a conversation with Stan Rosenberg. He was outgoing, knowledgeable about so many things, and a born to be a teacher. He was one of those people who were comfortable in his own skin and comfortable to be around. You liked himinstantly. We chatted for a long time, he introduced me to his wife, and that was that.

Time went by; I am not sure how long. I did not forget Stan. Stan was active in the Bob Opdahl turning movement in Hurley, NY. Stan was a regular at the Opdahl Barn turning sessions. Due to Stan's connection in this way with woodturning, I became reconnected with Stan as I had become interested in woodturning and he was a resource of information. We chatted mostly by phone over the next few years, seeing each other at Showcase (EXPO).

Students were coming through the woodturning classes I held in my shop and were looking to form a group related to woodturning. A club was in the making and Stan and I spoke of how it should take place and be formed.

The Adirondack

Woodturners Association (AWA) was formed and met in my shop for some time until the numbers got to be too many. NWA had a connection with Sears in Colonie Center and we were allowed to use the woodshop above the Sears retail store. At the time the NWA Youth Program also used this space. It was at this point in the AWA development that Stan Rosenberg began to attend our meetings as a member. He drove from the Mid Hudson region to Albany every month for our regular meeting and brought a carload of other turners with him from the Opdahl sessions. Stan was a source of many programs for those meetings. He was a shop teacher and quite knowledgeable about all things wood including woodturning. His knowledge, enthusiasm, and willingness to share was critical to the success of AWA in these early days. With no money and no pool of skilled woodturners from which to create early meeting programs, his knowledge and ability to teach were critical to the success of our meetings.



And successful they were! The AWA grew to so many that we could not fit into the space in the Sears workshop. Besides, because the workshop was in Colonie Center, many of the members were accompanied by their wives to do a little shopping in the mall. We were packed into that shop like sardines and spilled out into the hallway. Something had to be done and done fast.

Stan Rosenberg again came to the rescue! Somehow he contacted Curtis Lumber in Ballston Spa and arranged for us to meet at the site were quite happily remain to this day. Stan and his group from the Opdahl Movement continued to be members of AWA for many years.

The idea of Saturday woodturning "learn 'n' turn" at Curtis Lumber was Stan's. He organized them, arrived Saturday early morning with his car full of lathes (yes, more than one) wood, tools, extension cords, and everything needed to put on a "learn 'n' turn" for 10 people. Stan lead the class and everyone loved these events. We were growing and we were growing fast.

The group still needed monthly programming and special programming for Saturdays. Stan contacted other woodturners outside the AWA and arranged for them to do classes

and programs for us almost always without charge. In these early days of AWA, many people were contributing to the success of AWA, but none more than Stan Rosenberg.

He continued to come to monthly meetings and continued to bring a large contingent from the Opdahl area with him.

Eventually, NWA was to organize a Mid-Hudson Chapter. Woodturning within the Chapter was developing into a SIG of NWA and Stan's talents were needed. The trip to Ballston Spa each month also seem to become longer and longer, and Stan and the group from Mid Hudson formed the Kaatskill Woodturners Association. By this time the AWA was healthy, wealthy, and wiser in large part due to the efforts of Stan Rosenberg.

Stan Rosenberg, his talents, love of woodturning, and willingness to share were significant factors in the early success of the Adirondack Woodturners Association.

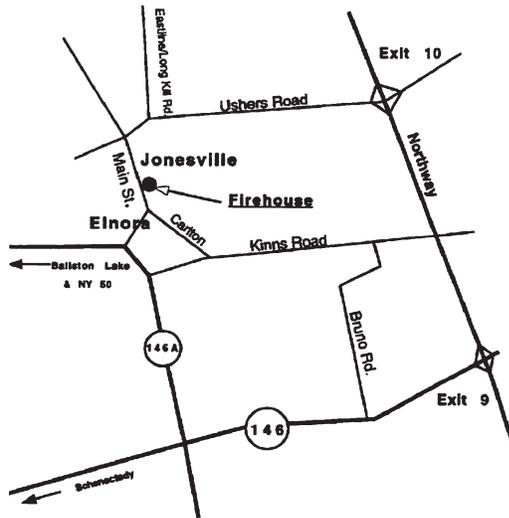
Thank you, my friend!

For all who turn wood with us today, thank you!





Northeastern Woodworkers Association
P.O. Box 246
Rexford, New York 12148-0246



Family Picnic

Sunday, July 19, 2009, 11:00 am
Jonesville Fire Station No. 1,
Main Street, Jonesville (Clifton Park) NY

GENERAL MEETINGS
AND SPECIAL EVENTS

For meeting cancellation
information,
call Ken Evans 753-7759
or Charlie Goddard 370-0388

SPECIAL INTEREST GROUPS

SPECIAL INTEREST GROUPS (SIGs)

Adirondack Woodturners Association - The AWA is active throughout the year. Meetings are every first Wednesday of the month (except in January and July when it is the second Wednesday), and are held at the Curtis Lumber conference room on Route 67, Ballston Spa. Beginners' sessions begin at 6 pm; the main program at 6:30 pm. Wednesday "Learn and Turn" sessions in Stillwater are also scheduled from 6 pm - 9 pm except on AWA member meeting nights. www.adirondackwoodturners.org Contact Ken Evans, 753-7759 or Kevans1@nycap.rr.com

Carver's Guild - meets every Friday at the Clifton Park Senior Center from 9:00 am to 1:00 pm. Sessions are intended for every NWA member who is interested in carving, from beginners to those wanting to learn a new technique. No reservations are necessary, just show up! Contact Bill McCormack, 233-7260.

Scroller's Guild - Meets on the third Wednesday of the month at The School at Northeast, 1821 Hamburg St., Schenectady. A beginner's session starts at 6:30 PM followed by a general meeting at 7:00 PM. Contact: Donna Phillips, (518) 372-3337 or dlphill@nycap.rr.com.

Kaatskill Woodturners - Meets the second Wednesday of each month at 7 p.m. at the Opdahl property in Hurley. Contact Matt Clark, (845) 454-9387.

Jim's "Hole in the Woods Gang"

Meets every Saturday, from 9:00 am until noon at Jim Kennedy's shop at 86 Guideboard Rd., in Halfmoon. (just 1 mile east of the Halfmoon Diner on Rt. 9). Our general purpose is public service work for various charitable organizations, including the Double H Hole in the Woods camp for children. We strive to foster a learning environment for our members through the projects we work on and the informal training/learning sessions given by and for our members. Sharing fellowship and relating experiences are a major part of our sessions, as we do accomplish many tasks during our times together as well. Contact Dick Flanders, (518) 393-5215 (rflander@nycap.rr.com) or Darrell Welch, (518) 477-8431 (ydwelch@taconic.net) for more information.

CHAPTERS

NWA Mid-Hudson -The chapter meets at 7:30 p.m. on the third Thursday, except July and August, at the Hurley Reformed Church. The Church is just off the the Hurley exit from Rte. 209. Right at the exit, right at the stop sign and left into the Church parking area. Contact Pete Chast, (518) 945-1636.

NWA Sacandaga - The chapter meets at 7 p.m. on the second Wednesday of each month at Mayfield High School in the woodworking shop. Park by the section of the building that protrudes further into the parking lot and enter the nearest of the (5) doors. Contact Gary Spencer, 863-6433.