

ECHOES FROM THE “BAT” CAVE

BALTIMORE AREA TURNERS

February 2018
Volume 13, Number 2

February Meeting: Making a Three Corner Bowl



Examples provided by Louis Harris

On February 15, Long-time BAT member and Program Director Lou Harris gave the club a demo on how to turn a three-corner bowl. Throughout the demo, Harris stressed the importance of not only starting with a cubed workpiece, but also the necessity of even spigots/tenons.

Equipment you will need—

- an even cube of wood
 - Revolving cup center
 - Scroll chuck OR wooden cup chuck
 - Roughing gouge
 - Bowl gouge
 - Parting tool
 - Jam chuck, cut to final diameter of your bowl's interior
1. Make a cube (length=width=height) for the base workpiece.
 2. Mount one corner in the headstock spindle and place the diagonally opposite corner in the revolving cup center.
 3. Adjust the compression between headstock and tailstock so the workpiece is held securely, and adjust your toolrest for correct height and clearance.
 4. Set lathe speed for roughing ($\text{RPM} \times \text{Diameter} < 6000$)

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Making a Three Corner Bowl (cont'd)

5. Turn lathe one and observe how the piece is turning. You will be shadow turning both spigots for now.
6. Turn the spigot/tenon at the tailstock end first leaving about 1/8" of waste wood. Part the waste wood off. This will serve as the bottom of the bowl.
7. Remove the workpiece, reverse and mount in a scroll chuck. If you don't have access to a scroll chuck, you can glue the piece into a wooden cup chuck.

If you are using a scroll chuck –

8. Using a revolving center in the tailstock, turn a second spigot/tenon leaving about 1/8" of waste wood. Part the waste wood off and mark the center of the second spigot.
9. Remove the workpiece, reverse and mount into the scroll chuck. Double-check your mounting compression and toolrest height.
10. Turn the bottom of the bowl at the tailstock end. You will be shadow turning, so keep your cuts light against the material. Once round, adjust your speed for your finishing cuts ($RPM \times Diameter < 9000$)
11. Sand and finish the bottom of the bowl.
12. Remove from scroll chuck and remount using the second spigot.
13. Turn the top side of the bowl, finish cutting the wings to your desired thickness.
14. Mark the center and hollow the bowl. You may want to drill a depth hole for guidance.
15. Sand and finish the inside of the bowl.
16. Remove from the scroll chuck.

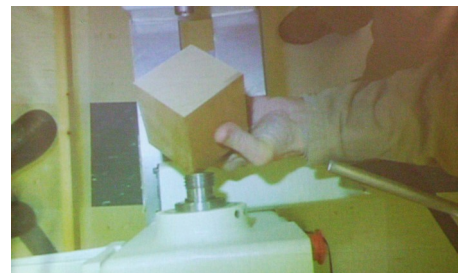
If you are using a wooden cup chuck –

8. Turn the top side of the bowl, finish cutting the wings to your desired thickness.
9. Mark the center and hollow the bowl. You may want to drill a depth hole for guidance.
10. Sand and finish the inside of the bowl.
11. Part the bowl from the wooden cup chuck.

To finish the three corner bowl –

17. Using a wooden jam chuck, remount the bowl on the lathe using the center mark on the spigot/tenon to align.
18. Shape the spigot/tenon to serve as a foot or remove it if desired.
19. Sand, finish and sign your bowl!

If you have any questions about this process, please contact Lou at louharris@verizon.net.



Interested in sharing a tool, technique or project with the club? Volunteer to demonstrate your project-in-progress at an upcoming BAT meeting. Contact program directors Lou Harris or Bob Pegram for details.

Repairing Bowl Cracks the Hawaiian Way

By Edward R. Cohen, M.D.

Just because a bowl develops a crack does not mean that it can't be functional or "artistic" and, in fact, the repair may add value to an otherwise ordinary bowl. There are numerous methods of repairing bowl cracks. We are familiar with filling cracks with glue or epoxy, often enhanced with a variety of fillers or dyes. The technique discussed below is the modern version of how ancient Hawaiians repaired their precious bowls centuries ago. The process involves inserting *pewas* (Hawaiian for fish tails) or *huini* (small pegs) to stabilize the crack.

Hawaiians held certain individual bowls, often referred to as calabashes due to their gourd-like shape, in high esteem and were sometimes named in honor of chiefs or relatives. These took on the importance of a cherished heirloom. The most highly esteemed had chants composed for them as though they were human beings.

Pewas are often referred to as bowties, Dutchmen, butterflies or dovetail keys. The technique takes some practice but the results are worth the effort. Huini (small pegs or dowels) were often inserted at either end of the crack to prevent the crack from extending. All that is required is drilling an appropriate diameter hole and glue one in. Huini add additional interest besides providing questionable stability to the repaired crack.



Bowl Selection and Preparation

The method described below is intended for dry bowls only. There are no specific criteria for the size and number of cracks you can stabilize as long as the bowl appears to be safe to turn on the lathe. A crack may require one or several pewas; however, pewas will stabilize a crack but will not transform a potentially dangerous bowl into a safe one.

The outside of your bowl should be turned to near-complete and sanded to at least 120 grit. The inside can be turned similarly or after you have attended to the crack(s). Hint: Save some of the sanding dust to fill in the occasional small area of tear-out in the insertion process.

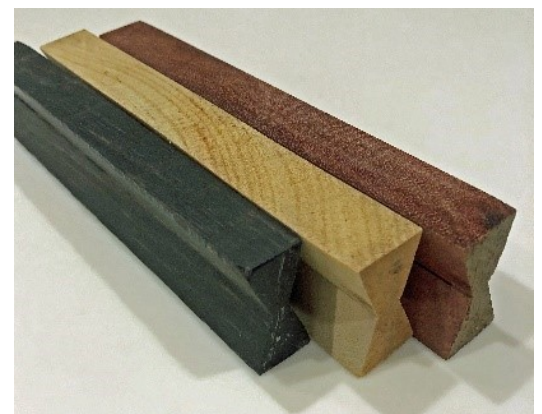
As far as the crack is concerned, you can either leave it alone or fill it anyway you like before or after inserting your pewas and huini.

Making Your Pewa

Pewas can be made from practically any hardwood but for best results, the long axis should follow the grain of the wood. The size is dictated by the width and length of the crack as well as visual appeal. Contrasting woods are generally selected.

Handmade: Making pewas is not difficult. They can be carved with traditional hand tools or with power tools such as a bandsaw, jig saw, or scroll saw. There are a couple of problems making your pewas by hand. Carving them one by one is a slow process that can be somewhat remedied by making pewa sticks as pictured. Pewas can then be cut from the stick at any desired thickness. The sticks are made on the table saw from boards cut to the desired height and width of your pewa. The technique involves trial and error to find the correct angle (usually 20 degrees) and blade height. Once it is found, you only need to make the same cut on all four sides and can then make several sticks of different woods.

Another problem with the handmade process is that it requires



hand cut recesses which are not easy for even an experienced woodworker. Unlike a flat board, the compound curves of a round and sloping bowl make creating a flat bottom challenging and the small size of the recess adds to the difficulty.

The Modern Method: In my opinion, the most economical, efficient and reproducible method is using a trim router fitted with a commercial template and inlay kit. Here is what you will need:

- 1-Trim router (also known as laminate trimmer)
- 2-Acrylic router base made for router bushings (probably comes with the router or can be purchased)
- 3-Brass inlay set (matching bushing, collar, bit and centering tool)
- 4-Hot melt glue gun

One modern method is to make a pewa and use it as a pattern for a template. The template can be made of any rigid material at least ¼" thick. The template is made using a router bit with the bushing that is followed around the sample pewa. Then using the template, identical pewas can be routed. Rather than make your own template, a premade laser cut acrylic one can be purchased. By carefully routing around the inside edge of the template, a series of perfect pewas can be made and then sliced from the wood.

Making the Recess

Commercial Template: The reason a commercial template is recommended is because it is not possible to hand route a pattern on acrylic – commercial ones are laser cut. The speed of the router bit will melt the plastic and foul the blade. Acrylic is the ideal template material. The template is affixed to the bowl with hot melt glue and being translucent, the adjacent glue buildup beneath the template can be seen and more added if needed for a rigid bond. The acrylic base of the router will glide easily over an acrylic template.

Removing the hot melt glue from an acrylic template after the recess is completed will take a while but is easier than on a wooden one. Removing the glue from the bowl can be simplified by applying masking tape on the bowl in the area where the glue will be placed. This method will also prevent wood fibers from being torn out as the template is removed. Glue that is difficult to remove from the template can be softened by brushing on some denatured alcohol.

Inlay Set: An inlay set is inexpensive and has everything you will need to make the pewa and matching recess. It consists of a brass bushing that is held in your router base with a brass nut. A brass sleeve is also part of the set and fits over the bushing for making the recess in certain methods. A centering bit is included so that the bushing will be perfectly centered. A carbide bit with a ¼" shaft and 1/8" down cutting bit is also included. The bushing, collar and bit are matched so that the routed pewa will fit perfectly in the routed recess.

As described above, you have already made the pewa using the brass bushing and now using the same bit and bushing proceed as follows:

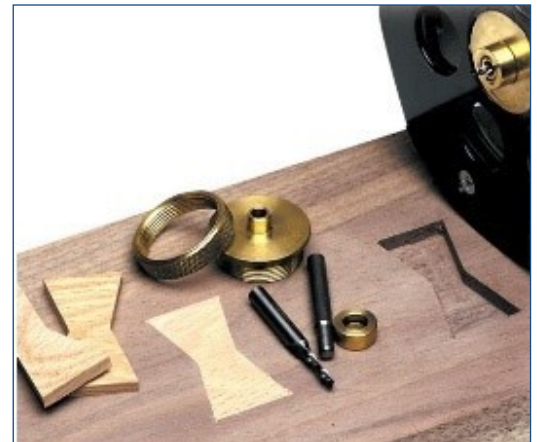
Step 1: Mark where you want the pewa(s) – perpendicular to crack with the narrowest point over the crack

Step 2: Using hot melt glue, affix the template over the marked spot

Step 3: Attach the small brass sleeve over the collar of the brass bushing

Step 4: Set the bit depth to about 1/16" below the bushing and make your first pass. Make a second pass 1/16" deeper and then a third 1/16" deeper which will give a 3/16" recess which is the thickness of the pewa. Route in a clockwise direction.

Step 5: Clean out all debris until recess is flat then detach the template (twist it off)



Step 6: The routed corners of the recess will be round and so you have three options: (1) round off corners of pewa, (2) sharpen recess edges or (3) purchase round edged pewas (available option)

Step 7: Apply glue (your preference) and tap pewa in place with a wood block

Step 8: Hand sand the pewa to avoid “sander bounce” as part of it will be proud due to bowl curvature. Once the pewa is flush with bowl surface, proceed to power sand to desired grit.

Recommended Method: There is even a simpler and quicker method that I would suggest at least until you have gained some experience making pewas. Rather than making your pewas, consider purchasing a 10-pack of 1.1” pewas laser cut for \$12 with a matching template for \$18. The only consumables are the pewas as the template can be used over and over. Use same process described above except that step 3 is eliminated as the purchased template is already sized for the matching pewa. [A variety of template sizes and matching pewas in several woods are available from Mark at Stebbins Studios \(see below\). Mark also has some helpful information on his web site and is great at answering your email.](#)

Inserting Huini

You can make your huini (also known as pegs or dowels) or purchase readily available 1/4” dowels. Adding huini to the ends of the crack is only an option. They can be the same wood specimen as the pewa. I use a nail or something similar to center a drill hole over the crack. I then use spotting bits (also called centering bits) of progressively larger sizes up to 1/4”. I prefer using spotting bits to avoid bit drift but a brad point bit should work fine. The diameter of the huini will rarely exceed 1/4” and can go through the wall of the bowl. Apply glue, gently tap in place, trim and hand sand like your pewa until flush.

Gaining Experience

While the process may seem daunting at first, it is actually quite easy. With a little practice, you can have a pewa in place in less than five minutes. The longest part of the process for me has been breaking the hot melt glue bond from the template.

The hardest part is getting used to routing the recess. You are doing it entirely by feel as the bushing covers the bit as it proceeds around the template. Until you gain experience, I would turn few practice recesses on a flat board and then on a practice bowl with a simulated crack and practice inserting a few pewas and huini. After two or three, you will be ready for the real thing.

To begin routing the recess, start the router cut in the middle (as opposed to against the template) so if the bit jumps, it will not foul your template. The best way to avoid a jump is to get a very firm grip on your router and routing out the depth of the recess in two or three passes.

References

Two good YouTube videos: <https://www.youtube.com/watch?v=-3qp2eMxDPg>. And <https://www.youtube.com/watch?v=7srIFcsK0eQ>.

Woodturning magazine: issue 313, Winter 2017, pgs. 31- 35.

Material Sources

Trim Router (lamine trimmer): \$100 - Home Depot, Lowes, www.amazon.com

Inlay Kit: Harbor Freight (\$9:00) fragile bit; www.amazon.com (various \$25.00) recommended

Hot Melt Glue Gun (not mini): \$25 with 10 glue sticks: www.amazon.com

Bowtie Template set: Rockler www.rockler.com (\$20), Woodcraft www.woodcraft.com (\$40)

Pewas and matching templates: www.stebbinsstudios.com.

Have more questions about this method? Email Ed at polodoc@erols.com or join us for the next BAT meeting where Ed and Ron Ford will be demonstrating during a hands-on session.

Beginner's Corner: Dealing with Tool Catches

By Gynene Sullivan and Louis Harris

It's a scenario that all turners face one time or another: you're having a great day in the shop, making progress on a bowl or box and suddenly BANG!...you catch your tool. We've both had our fair share, but with a little time and effort, here are some suggestions on how to deal with them and get back to enjoying your turning.

Step 1: Step away from the lathe

You're using a sharp tool against a piece of wood that isn't always square, and, depending on the moisture content, it may even move while you're turning it which forces you to adjust your style rather quickly. When you have caught a tool, first things first: *step away from the lathe and turn it off*. Regardless of whether it's your first catch or your twentieth, you should take a few minutes to compose yourself. There is absolutely nothing wrong with taking a few deep breaths, grabbing a drink of water or going to pet your shop dog or cat.

Step 2: Assess your practice

How do we make a cut? Adjust the tool rest, place the tool shaft on the rest, orient the cutting edge and place the bevel on the wood. To begin the cut, slowly raise the tool handle until the cut is started, then traverse the tool to continue the cut. Raising the tool handle brings the cutting edge closer to the center line of the work-piece and creates a clearance angle between the bevel and the wood. When this occurs, the clearance angle and the depth of bevel under the cutting edge are both very small.

With the lathe off, assess how you are approaching the wood. How much tool you are presenting to the wood? Is your bevel fully supported by the tool rest? Did you present too much of the cutting edge to the wood? Do you have enough of a clearance angle? Are you increasing the clearance angle too quickly? Are your tools sharp enough? Which leads us to...

Step 3: Check your tools for sharpness and damage

Depending on the hardness of the wood you're working with, your gouge or scraper may have taken some damage either from the wood, striking a part of your lathe or falling on the concrete floor of your workspace. You may have to reshape and sharpen your tool because the catch took a chunk out of it. A mantra to remember: Sharp Solves (Almost) Everything!

Step 3: Check the integrity of your wood

When you're ready to approach your lathe again, check your piece for any new cracks or damage. Depending where you are in the turning process, you may be able to correct any new defects with some light scraping. For larger cracks, consider filing with epoxy or securing with *pewas* or *huini*.

Once you're ready to start turning again, start out slowly in order to ensure that the piece is still turning true. If at any time your lathe starts to vibrate, you're going too fast.

Getting a tool catch can be a pretty scary and confidence-sapping proposition, especially for a beginner. But by taking some time and checking some key things, you'll be back to turning in no time!

A Note on Safety

While wearing safety glasses is great, the best piece of turning equipment to invest in is a full face shield. That way, your face and neck are protected from any catches that may crack or shatter a larger piece. A good face shield will cost between \$20-40 and will be well worth the cost in the long run. The [Uvex Bionic Face Shield](#) is available on Amazon and other outlets; it's lightweight, can adjust for a multitude of head sizes and comes with an easily replaceable polycarbonate shield.

Maryland Tightens VOC Rules

At the beginning of this year, the State of Maryland implemented new, more stringent Volatile Organic Compounds (VOC) laws. Here's a list of the substances that are affected—

- Acetone
- Lacquer thinner
- Turpentine
- Gloss Remover
- Mineral spirits
- Methyl ethyl ketone (MEK)

These items are still available for purchase in surrounding states, but online sellers will no longer be able to ship them into Maryland. There will likely be compliant substitute versions available at some point, but their usefulness is yet to be determined. Thanks to Ron Ford for passing along this information!



President's Challenge Update

The second challenge of 2018 is "Embellishments." Use carving, pyrography, watercolors, oil paints or acrylics to decorate a piece of your choice. No dyeing allowed!



In case you missed it, the first challenge of 2018 is "Back to Basics." Create a utilitarian turning to solve a problem, like a tool handle, a drawer pull, or something else that you would use every day.

Photos: Bob Sobczak, for the first President's Challenge. Do you know what it

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Visit us at woodturner.org

BAT is a local chapter of the American Association of Woodturners (AAW) which serves the Baltimore metropolitan area. A wide range of skills and interests are represented by our members. Work ranges from small utilitarian project to galley art and includes pen making, bowls and platters, hollow forms, small projects, furniture spindles and architectural work. We are fortunate to include professional turners and published authors among our members. Membership is open to anyone with an interest in woodturning, and guests are always welcome.

Registration Now Open for Mid-Atlantic Woodturning Symposium

Join BAT and other turners from Pennsylvania, Delaware and New Jersey in Lancaster, PA for the Mid-Atlantic Woodturning Symposium September 28-30. Demonstrators include John Jordan, Michael Kehs, Malcolm Tibbetts, Beth Ireland, Art Liestman and Mark St. Leger. \$185 includes two days of demonstrations, a buffet lunch both days, plus a special “Meet the Demonstrators” event Friday evening. [Click here](#) for more information and to register!

Baltimore Area Turners next meeting: Wednesday March 14, 2018

Featuring hands-on sessions in carving, sharpening and mending cracks.

The club meets every month on the second Wednesday of the month at 7:00 pm. Our meetings are held at the Boumi Temple located at:

5050 King Avenue
Baltimore MD 21237-3325

Drive around to the parking lot at the back of the building and enter thru the set of glass doors. If the door feels like it's locked, it's not, just give it a tug!

Coming Soon: BAT Classifieds

Got a tool to sell, looking for a used lathe? Send your information to gynenesullivan@gmail.com for Inclusion in the next newsletter!