

Emerging Bowls

Alabama Woodturners Association

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Methods of Turning an Emerging Bowl

- Method A: The “traditional” method
 1. Start by “paper gluing” the wood
 2. Turn a hemisphere at one end
 3. Split wood
 4. Turn inside of bowl
- Method B:
 1. Turn the inside of the bowl
 2. “Paper glue” waste block to end opposite the bowl
 3. Turn the outside of the bowl
- Method A’: Same as Method A except add step 1.5
 - 1.5 Bandsaw outside of the hemisphere
- Method B’: Same as Method B except add step 1.5
 - 1.5 Bandsaw outside of the bowl rim
- My current preference in order: A’, B’, B, A

Holding the Wood

- Methods
 - Faceplate
 - Four Jaw Chuck – with either 4 or 2 jaws
 - Jumbo/Mega Jaws on Chuck –with 4 or 8 pins of various styles and sizes
 - Hot glue on Backing Plate
 - Double Sided Tape on Backing Plate
 - Special, maybe Individually made, Jig
- Things to consider
 - Is it secure/safe?
 - Does it require extra wood?
 - Does it require more glue-up?
 - Is alignment easy or hard?
 - Can adjustments be made?
 - Is turning simplified?

Choosing the Wood

- Emerging bowls are always part of a sphere & as a rule the bowl is half a sphere. So, as a rule, the thickness of the wood will need to be greater than the radius of the bowl. (Break this rule!) The width will need to be greater than twice the radius, and the length can be whatever you think looks good.
- Grain direction is normally oriented along the length or the width of the wood. Grain directed along the thickness is also possible.
- Methods A & A' require two blocks of wood of equal size. The second block may be scrap wood and could be laminated.
- Methods B & B' only require one block and some scrap wood the same width and thickness, but only about $\frac{1}{2}$ as long.
- Normally you would choose sizes so when the two blocks are glued together the end opposite the bowl would be a perfect square.
- Extra wood might be useful for holding the wood block on the lathe, and could always be cut off later.

Method A & A' – First Mounting

- Glue the two pieces of wood together using a paper joint. Let the glue fully dry.
- Method A' Only
 - Carefully draw a circle the size of the outside diameter of the desired bowl on one end of the wood block, centered on the width and tangent to the end of the block.
 - Draw a line parallel to the end of the block and through the center of the circle.
 - Bandsaw along the line to the circle and from the center of the end along the circle to the line on both sides.
- Mount the block on the lathe using whatever method you wish. I normally use my Jumbo/Mega jaws with all 8 pins that are 1.5" long. Whatever method you use it is important to get the center of the block aligned with the center of rotation of the lathe.
- Turn a half sphere the diameter of the bowl at the end of the block.
 - If method A' is being used, the half sphere is semi visible in the spinning wood and the flat spots on the sphere show where more wood needs to be removed.
 - Templates help get it right.
- Sand the half sphere and the flat side of the block next to the half sphere.

Method A & A' – Second Mounting

- Remove the block from the lathe and split on the paper glue joint. I use a sharp knife and/or chisel.
- Use a compass to locate the center of the bowl. Draw a circle where you want the inside of the bowl to be. This is where you can see how good a hemisphere you made!
- Mark the center clearly after you have found the it. I push hard on the center point of the compass and then use a center punch.
- Remount on the lathe using a pointed center in the tailstock to align the center of the bowl to the lathe's center of rotation.
- I use my Jumbo/Maxi jaws or hot glue on a backing plate.
- Check the alignment by using a pencil to draw where the inside of the bowl rim will be. Adjust as needed.
- Turn the inside of the bowl, checking bowl thickness as you go.
- Sand the inside of the bowl.

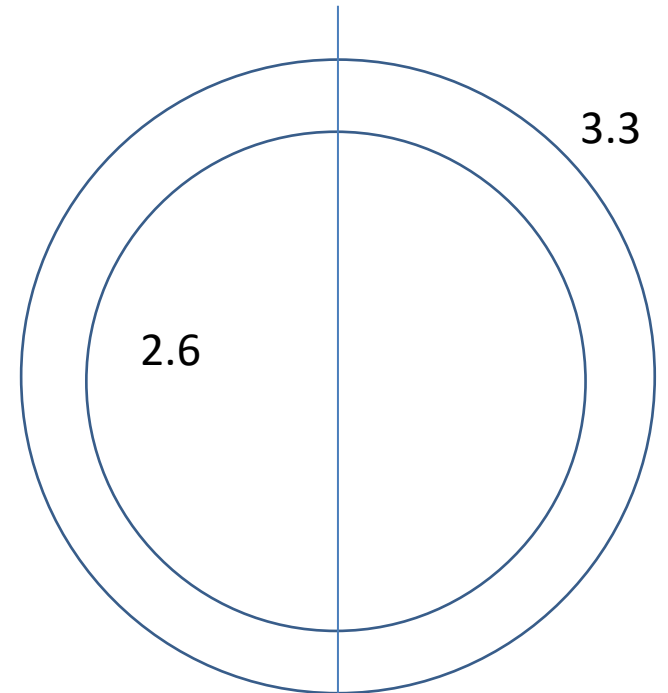
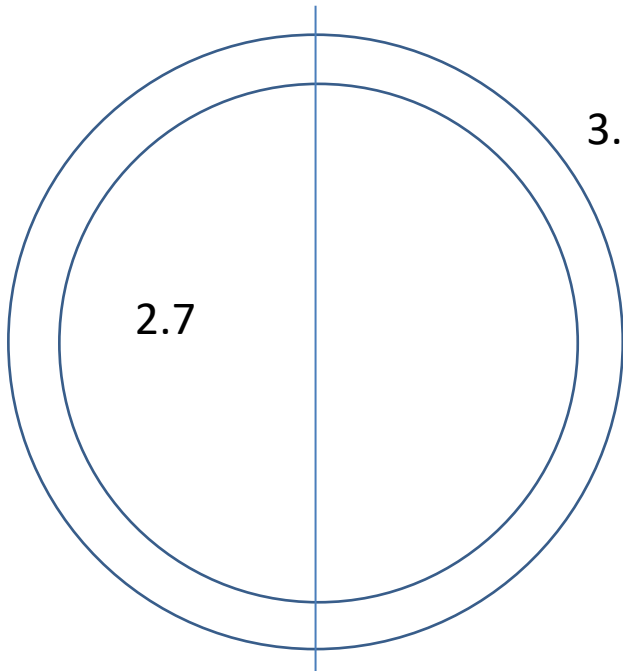
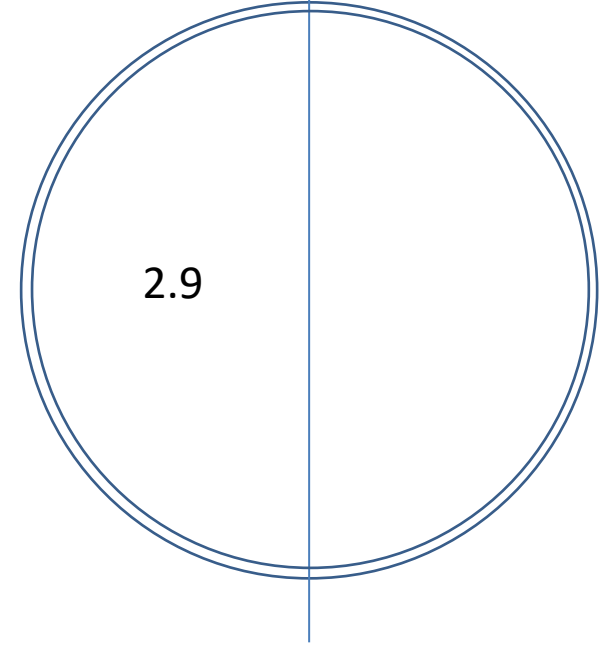
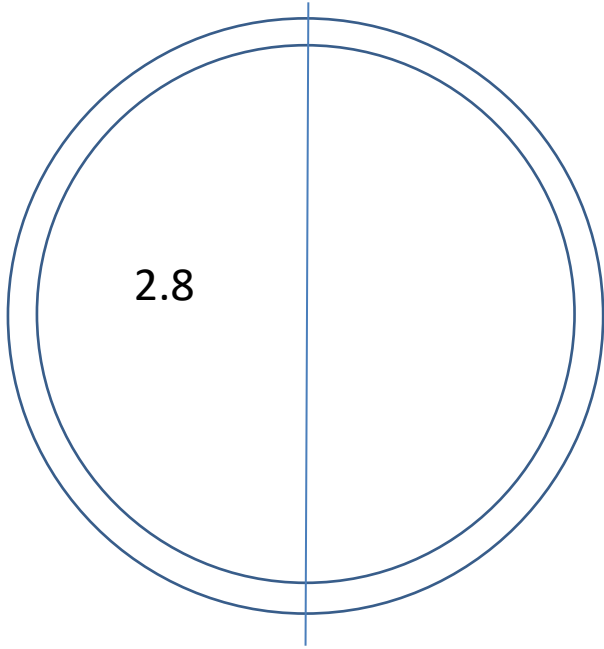
Method B & B' – First Mounting

- Carefully draw a circle the size of the outside of the desired bowl on one end of the wood block (this is single thick block), centered on the width and tangent to the end of the block. Using the same center draw another circle to show the desired inside of the bowl rim. I push hard on the center point of the compass to clearly mark the center.
- Draw a line parallel to the end of the block and through the center of the circle.
- Method B' only – Bandsaw along the line to the circle and from the center of the end along the circle to the line on both sides. Note: If this method is used the center of the bowl does not have to be near the end of the block.
- Mount the block with the center of the circle aligned with the center of lathe rotation using a pointed center in the tailstock.
- Turn the inside of the bowl. The depth of the bowl should be $\frac{1}{2}$ the diameter of the bowl minus the thickness of the bowl. For example, for a 3" diameter bowl with a thickness of $\frac{1}{8}$ " the depth should be $\frac{3}{2} - \frac{1}{8} = 1 \frac{3}{8}$ ". Make the inside as close to a hemisphere as you can. Templates will be useful.
- Sand the inside of the bowl.

Method B & B' – Second Mounting

- Measure the distance from the end opposite the bowl and the line through the center of the circle which was parallel to the end of the block. Cut the scrap wood this length and glue it with a paper joint aligned to the end opposite the bowl.
- Mount this block with the top of the bowl aligned with the lathe's center of rotation. I normally use Jumbo/Maxi Jaws with 8 pins 1.5 " long.
- Turn the outside of the $\frac{1}{2}$ bowl. The inside of the bowl will be semi visible in the spinning wood, helping you make the bowl's outside round.
- Carefully sand the outside of the bowl and the side of the block next to the bowl. Try not to sand the rim too much.

3" Templates



Making Bowl's Rim Consistent

- Unless you are really good at turning the half sphere, the rim of the bowl will need some hand sanding. Maybe a lot of hand sanding!
- You will be surprised how easy this is done, as the wood drops down away from the rim, thus requiring removal of only a small amount of wood.
- Another method that will help is to turn the outside rim of the bowl at the same time as the inside is turned. The top might also be turned down so that the bowl sits up slightly over the top.
 - + The rim will be of perfectly even width.
 - + The amount of wood that needs to be hand sanded away is reduced.
- The top, bottom, and three sides of the block may be trimmed as you see fit.
- Sand and finish as desired.
- DONE!

References

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