

Manta Ray Bowl

Creator: Terry Scott, NZ

Adapted and demo'd by:

Kelvin B Burton, Van TX



Choose a piece of wood that is clean and free of cracks, bark inclusions, etc. In this demo I am using Soft Maple approx. 6" x 6" x 2-1/2".

It is important that the piece be square, and the sides be of equal length. I used my home-made lathe mounted disc sander to clean up the sides.

Mark the center and drill a hole for the screw chuck. This will be the top of the piece when it is completed.

Make sure the hole is as exactly centered as you can get it!



With the blank securely screwed onto the screw-chuck start turning the bottom of the wings and bowl including the tenon. The tenon will become the feet in the final step.

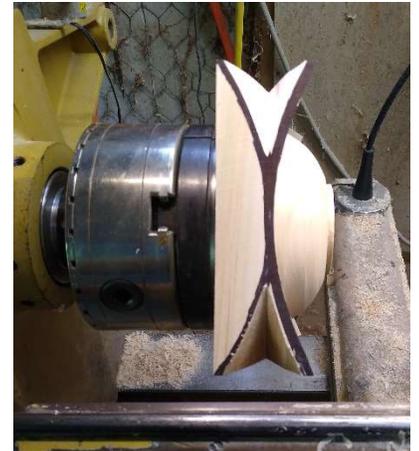
If the wings are not to support the bowl then make sure to remove enough wood at the corners so that they end up above the tenon base.

The degree of slope of the underside of the wings determines how much curve you will achieve on the sides. Note: Using the tailstock is possible but it restricts access to the bowl.

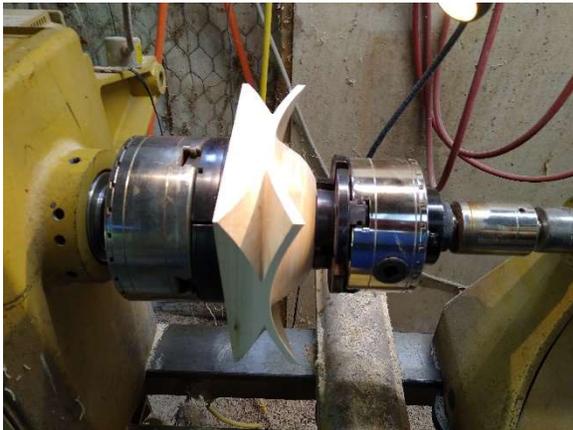


Using a Sharpie mark out the position of both bottom & top wings on one side of the blank. Make sure that they merge together at the center and that the top corners are slightly below the top (left in pic.) of the blank.

These are guidelines only and will be visible when the piece is spinning.



The next step is to remove the wood from the "V". If you're brave you will use the long point of your skew as Terry does. Alternatively, you can follow my example and use a detail spindle gouge. I use the 1/2" Mike Hosaluk tool by Doug Thompson.



Next we need to reverse the piece by unscrewing it from the screw-chuck and mounting it using the tenon on the bottom of the piece.

To make sure that you achieve perfect alignment you can mount a 2nd chuck on the live center using an 3/4" to 1-1/4" adapter and clamp it to the tenon before removing the screw-chuck.

With the piece reversed you can start turning the top wings and bowl. The tailstock can be in place while you form the top wings but will need to be removed to form the bowl and of course when you hollow the bowl.





The wings and bowl top are formed, let the hollowing begin!



After an initial "V" cut with my $\frac{1}{2}$ " Thompson bowl gouge with a 40/40 grind I did the rest of the hollowing with Mike Hunter's straight and swan neck "Baxter" carbide tools.

Final cleanup of some torn end grain was done with a teardrop scraper.

A bead around the opening of the bowl gives it a nice touch!

I used a $\frac{1}{4}$ " D-Way beading tool for this step.





Removing the surplus wings! There's a number of ways to do this but I find a coping saw works great! I used the Indexing feature on my lathe for the first time ever to stop the piece from rotating while I sawed off the wings I didn't want.

I typically like the 3 up, 1 down configuration but it's up to you!

Just don't cut too close to the finished surface, it's easier to remove a little surplus than to put it back!

PS: I'm not left-handed, just can't take photos with my left hand!

Four wings removed, four left! →





Using a rotary tool with a Saburrtooth cylindrical cutter you can quickly remove the excess leftover wing material. Finish the process with sandpaper.

Using a carving vise makes it easier to get to the underside but reversing the piece on the lathe works too.



Almost there! Remount the piece in the lathe on an expanding chuck to clean up the tenon for carving into 3 feet.

Mark 3 equidistant positions for the feet with dividers set to the radius of the tenon. Mark every 2nd touchpoint around the edge of the tenon.

Remove a portion of the tenon with the Saburrtooth burr to make sure the center of the base is aligned with the bowl!

Now, using the Saburrtooth burr in the Dremel (or similar rotary tool) remove the parts of the tenon that don't look like a foot.

Be careful not to take away too much, it's very hard to put it back! Don't ask me how I know that!

Hand sand as soon as you think you are getting close.

The carving vice with the expansion chuck is very helpful for this step.



Sanding done and 3 bumps to support the finished piece – and a small divot where my tailstock point went a little too deep in the tenon 😞

Project completed!

Well, almost, just need to add some pyro embellishments and some finish.

Hope you made it this far and enjoyed the process!

Any questions? Email me at kelvin@burtonclan.us

