

## ***Tom Wirsing Platter Demonstration***

By John I. Giem

The turning of an 18" platter was demonstrated by Tom Wirsing at the Rocky Mountain Woodturners meeting on April 8, 2010. Before the demonstration, Tom handed out a set of notes outlining the demo. Those notes will be reproduced at the end of this report. I will try to



supplement those notes and will not cover everything in them but instead will 'fill in the gaps'. Tom used a maple blank about 2" thick that had been cut into a circular blank. Most blanks of this size are not perfectly flat but will be slightly warped or cupped. A faceplate is mounted on the most concave side. This will be the upper surface of the platter, consequently the mounting screw holes are in the waste that will be turned away. After mounting the faceplate on the lathe, the mounting of the blank was adjusted or fine tuned. Using the tool rest as a

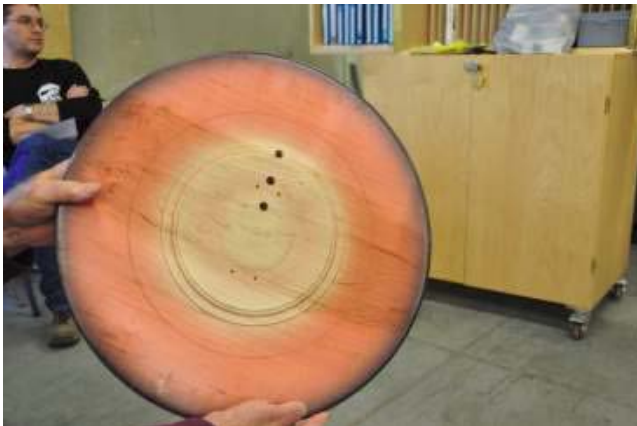
guide, the lowest points on the top of the platter, side toward the headstock, were identified. With the screws of the faceplate loosened, wedges were driven between the faceplate and the wood blank to adjust the identified low points equally spaced from the tool rest. All screws were then retightened for the turning of the platter.



- After mounting, a wide rim was cut on the top surface to establish where it would be. He used pull cuts due to the lack of space between the platter and the headstock.
- The outer rim was cut smooth.
- A recess was cut on the bottom that would be used for mounting on a chuck in an expanding mode. The recess must be as small as possible to just fit over the jaws of his chuck when it is fully closed giving the most holding power.

- A cheater stick (story stick) that matched the size of the jaws was used to gauge the size of the recess.
- A bedan tool that was ground to match the bevel on the outer surface of the jaws was used to carefully cut a tapered wall on the inside of the recess.
- He has never had a platter come off of the lathe when he mounted using a recess cut in the manner.
- Using a pull cut, he shaped the outer surface of the bottom. At this point, tear out was not a concern.
- At the outer edge of the bottom, he slightly under cut the rim to give a slight ridge around the rim so that the platter will be easier for the user to pickup.
- Final shaping was done with a bowl gouge ground to 60 degrees which gives less tear out on silver maple. A 40 degree gouge goes under the fibers and causes more tear out.
- A skew was used to define the foot around the mounting recess.

- Tom does not like to sand. Therefore he uses a negative rake scraper to take light cuts and remove any remaining tear out.
- One of the scrapers was ground using the tool rest set at 20 degrees. Both sides of the scraper were ground at 20 degrees giving an included angle of 40 degrees.
- Tom uses tools ground at different angles for different cuts. At home he has multiple grinders. On each grinder, the tool rest is set to a specified angle and is never changed.
- He is able to start hand sanding at 120 grit paper and goes down to 400 grit.
- After the bottom surface is completely finished, including signing, he seals the bottom with sanding sealer.
- The bottom with multiple thin layers of non-catalyzed furniture lacquer. Each additional layer will fuse with the previous layers yielding a continuous film from top to bottom.
- The bottom of the platter is completely finished and buffed out before taking it off of the lathe and faceplate.
- The outer edge of the top surface is much wider than it will be when finished. This rim is completely sanded to a fine finish before applying the colored dye.
- The dye was applied with an air brush with the platter rotating on the lathe and allowed to dry.
- He uses Transtint dye with alcohol as a carrier. Alcohol dries faster than other carriers.
- After the dye on the rim has dried, he cuts out the center of the platter.
- The center has multiple depth holes for guidance. The depth holes were drilled off the lathe using a drill press for accuracy.



- Care must be taken to avoid marring the dyed surface.
- The edges of the center hollowing cuts through the dyed surface giving a sharp transition between the natural wood and the dye.
- The curved edge of the center hollow is cut with a small gouge that has the heel of the bevel relieved. This allows him to make a smoother cut.
- Very careful to minimize tearout as it is hard

- to sand out particularly near the edge of the dyed rim.
- Uses a small straight stick to check for flatness in the bottom.
- Uses both flat and round scrapers (negative rake) to smooth out the bottom surface.
- He avoids power sanding, hand sanding only and uses a sanding block as much as possible.
- Uses Sherwin-Williams water white CAB acrylic lacquer.
- He lets the lacquer harden for several days before buffing it out.
- The buffing is done on the lathe using automotive buffing compounds.
- Starts buffing with #9 and goes to #7.



## Tom Wirsing's Handout

### Platter, 18", Lacquered, with Colored Rim, Process Steps

Following are the process steps to turn an 18" diameter platter with colored rim, finished in lacquer. The platter must be remounted on the lathe after it is completely finished in order to rub out the lacquer finish as the last step in the process.

1. Mount the blank on a faceplate. If the blank is cupped, mount the faceplate on the concave side (the concave side will become the upper face of the platter). Use hardwood wedges if necessary to get the blank to run true. Use plenty of screws to insure the blank is securely mounted. A blank 18" in diameter and 2" thick is heavy and dangerous!
2. Face the outer 3 or 4 inches of the upper face, taking care not to let the gouge contact the wedges. This establishes the position of the upper face of the platter, which you must do before beginning to shape the bottom of the platter.
3. Turn the edge of the blank so it is complete round (no flat spots around the edge of the blank). This establishes the maximum diameter of the blank.
4. Remove some of the excess wood around the outer 4 or 5 inches of the bottom face of the blank to begin to balance the blank.
5. Cut the foot, and the recess by which the platter will be remounted later to turn the face. The foot should be about  $\frac{3}{32}$ " tall, and the recess should be about the same depth, so they match. The recess, by which the platter will be remounted later in the process, must be very precisely cut in order that the platter be securely remounted to turn the face. The recess should be just barely greater in diameter than the fully-closed jaws of the chuck, which will expand into the recess, so that when remounted, the contact area between wood and jaws is maximized.
6. Cut the remainder of the bottom of the platter, creating a smooth ogee curve from the foot to the rim, and leaving the rim approximately  $\frac{1}{4}$ " thick.

7. Sand the bottom to 400, sign it, lacquer the bottom, and return the platter to the lathe to rub out the lacquer..
8. Remove the platter from the faceplate, drill several guide holes near the center of the platter to within 5/8" of the underside (the holes help establish remaining thickness as the face of the platter is turned) and remount the platter by the recess created in step 5 above.
9. Turn the rim of the face of the platter, leaving it wider than its final width, sand to 400, seal with lacquer sanding sealer, re-sand to 400, and color the rim. Use an airbrush, and Transtint metal complex dyes diluted in ethanol, to apply the colors.
10. Turn the center of the platter, taking care not to scratch or mar the colored rim. When the center is turned, you will remove wood adjacent to the colored rim, producing a very crisp demarcation between the colored rim and the natural wood in the center. The center of the platter should be flat (in a plane).
11. Sand the center to 400, taking care not to let the sandpaper touch the colored rim.
12. Lacquer the upper side of the platter, then remount the platter for final rub-out of the lacquer.