ONE GOOD TURN

Meetings: Odd Months Second Tuesday 6:30 pm Dan Hershberger Shop

Winter Meetings Second Saturday 12:30

Beads of Courage

Thanks to all who made boxes for the Beads of Courage program. This will be an ongoing program because it is for such an important cause. Members are encouraged to make a box or boxes to donate

January Meeting

The Great Falls Woodturners met on January 14th at Wayne Petrini's shop for a discussion and demonstration of resin casting. There were 11 people present. We started the demonstration at 12:30 pm.

Wayne started out the demonstration with a very informative overview of resins for casting. He discussed the differences between polyester, urethane, and epoxy resins, and explained why he prefers epoxy resins. He explained that resins are two-part chemical mixturess, with a resin and a catalyst, and stressed numerous times that measuring and mixing must be

done to manufacturer's directions. Some resins and catalysts are mixed by volume ratios, and some are mixed by weight ratios. It is important to know which you are working with.

Using rice to measure the volume of the mold

Wayne also explained that if the resin and catalyst ratio is incorrect, the resin will take weeks to cure or may never cure. While it is uncured, it is a sticky mess which can't be used for anything.

He passed on small details which only come through experience, such as you will spill some of the resin or catalyst at some point, so wear a turner's coat and latex gloves. If you do get any on your skin, denatured alcohol, lacquer thinner, and acetone

can all be used to clean off the resin or catalyst, but denatured alcohol will be nicest to your skin.

Resin and catalyst can be made thinner and easier to work with if they are gently heated *before* mixing, 120 F is a good temperature for this. Wayne uses a pizza oven in his shop to heat the jugs holding the resin and catalyst. However, if the resin and catalyst are heated after mixing, it will speed up the curing process.

Molds for casting can be made out of almost anything. The mold for this project is a colander Wayne bought at the Dollar Store, lined with strapping tape and coated with caulking on the outside. Wayne stressed that while there are many ways to close up holes in a mold, using a hot glue gun and just about anything impervious to resin and catalyst, this must be done before pouring of the resin and catalyst mixture begins.

Resin is expensive. But it is also important to mix a bit more than you will expect to

use for a project, especially if you are coloring the resin. So, Wayne uses a mold filler for bowl castings to fill up some of the space which will be turned away when the bowl is finished on a lathe. For this project the mold filler was a hardwood hemisphere, coated so it would not soak up any of the resin, and attached to a jig which would hold it centered in the bowl mold.

An approximate measure of the volume of resin which would be needed was made, using dry white rice. The mold and mold filler were assembled, the rice was poured in, and then the rice was poured out into a measuring cup. This is a rough measure, so a bit more resn and catalyst should be mixed than the rice indicates. Following that was a discussion of mixing cups. Wayne uses automotive paint mixing cups, which are marked for various ratios of mixing fluids by volume. These mixing cups are also available at ProBuild in Gt Falls in the paint section. Again, it was reiterated to not guess when it comes to mixing resin and

catalyst.. If there is too much of

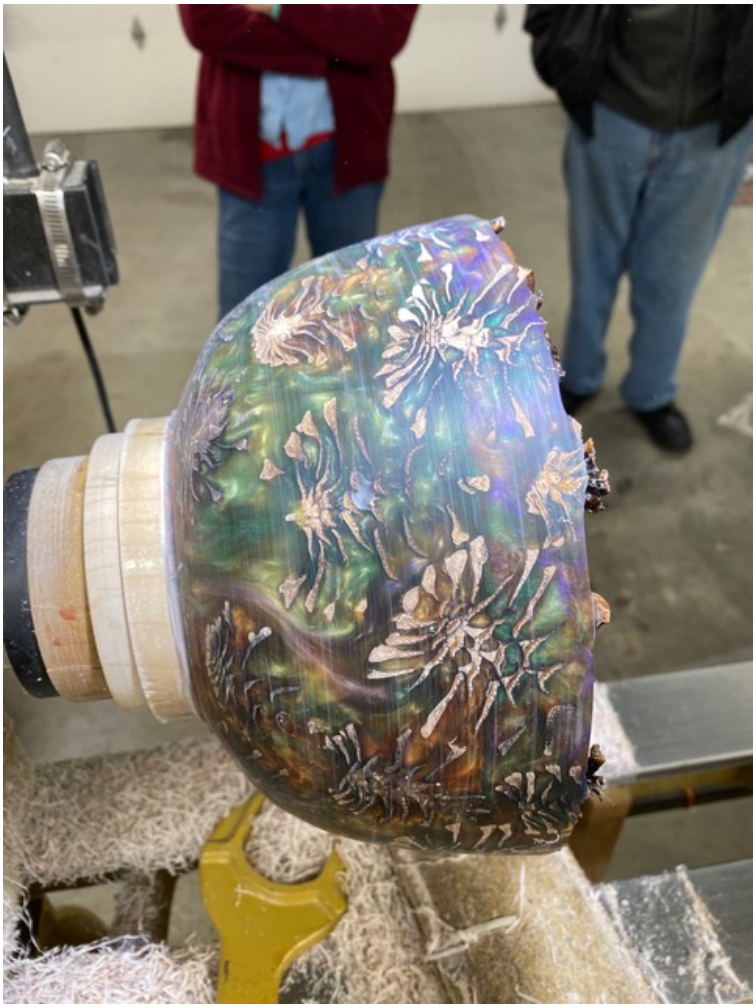
both to fit into the marked portion of a measuring cup, then use two measuring cups, but definitely don't guess.

Wayne also showed us some of the molds he keeps for extra resin left over after a pour. One was a small rectangular frame lined with HDPE for pen blanks. Another was a small plastic jug which will hold enough resin and catalyst that once it is full, it can turned into a goblet-sized item or pepper-mill-sized item.

The casting for this project is a hybrid casting, meaning it will have wood mixed in with the resin. Wayne explained that most resins are hydrophobic and will bubble or otherwise react if they are placed next to any items which have water in them. Wayne used pine cones which he had cut and sanded so they were one inch thick, and dried in a food dehydrator for two weeks to make sure no water remained.

These pine cone slices were lightly tacked onto the sides of the mold with a hot glue gun, to make sure they were not moved around by the resin being poured in.

Then it was time to start mixing the resin and catalyst. It was decided to make multiple small batches of different colors so the colors could be layered and intermixed during the pouring. Members of the audience were invited up to help mix the resin and catalyst in the smaller containers. Mixing takes calm but continued stirring for at least three minutes, as the mixture goes from streaky to water clear. The sides and bottom of the container should scraped with the stirring stick to make sure everything in the container is stirred together.



Wayne then showed us the plethora of resin coloring agents he has. Any alcohol or acetone-based dye will work. In most cases, a little bit of dye goes a very long way and opaque dyes are definitely opaque. There are also fine colored powders, some white and some colored, which can be used to color the resin. As with the dyes, a little bit of the coloring powders can go a long ways. The resin and catalyst batches were colored copper, purple, green, and gold.

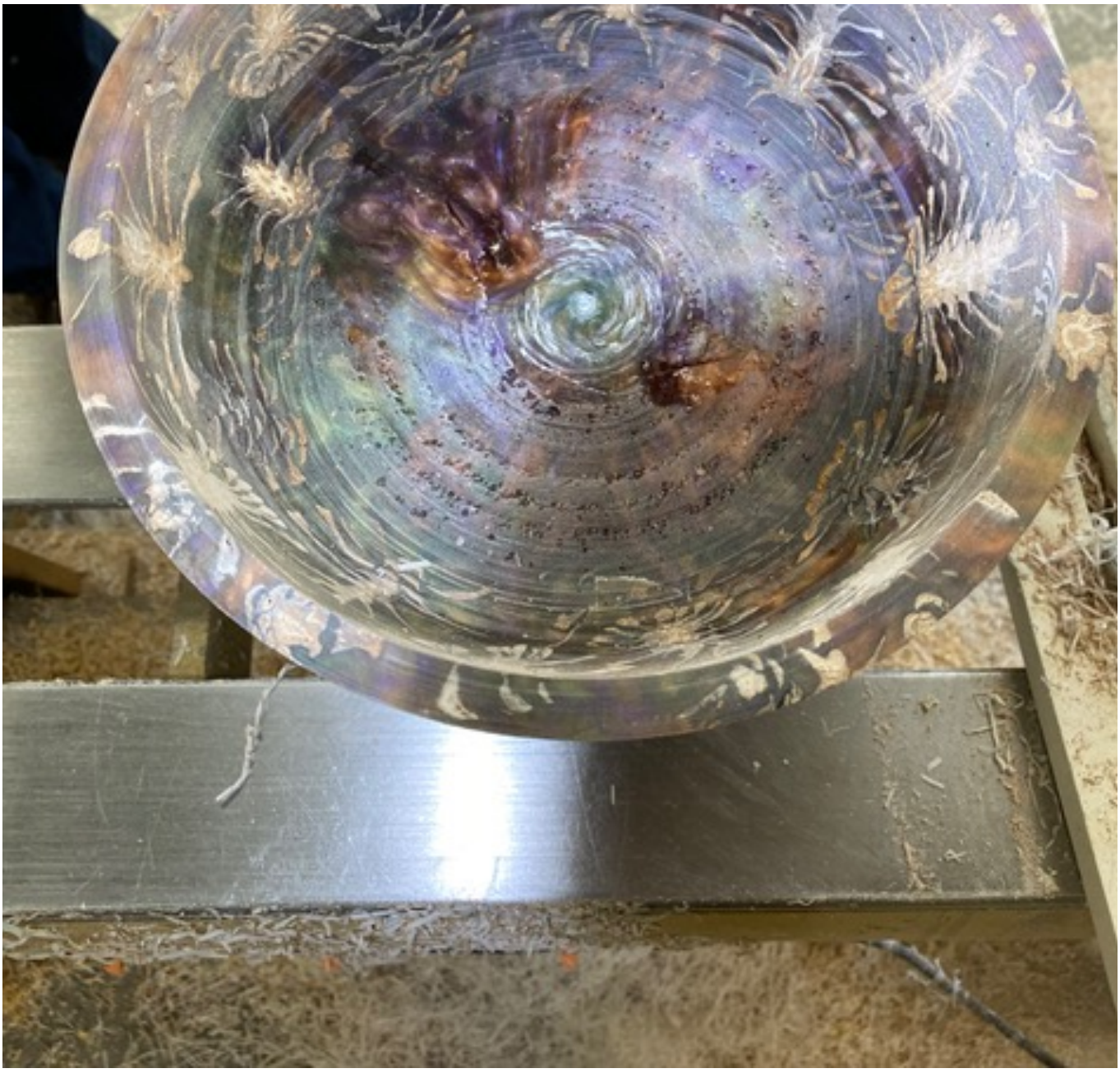
Then it was time for the pouring and we all learned that Wayne was correct, this stuff is thick and tends to spill a bit when pouring, Imagine trying to fill a cake mold with honey

and that's about the thickness and stickiness of a resin pour. Everyone who wanted to got a turn at pouring in the colored resin and catalyst mixtures, bit by bit.

Finally, the entire thing -- mold, pine cones, resin, mold filler, and jig -- was lowered into a pressure pot.

The cast bowl was taken out of the mold and turned on a lathe on January 28th. The wooden center used to take up space, was turned out at the same time.

Camille Good



Website of the Month

There are many sources where one can compare and purchase the many different kinds of resin for casting. One of the more complete sites is

TheEpoxyResinStore.com

Check it out.

Next Club Meeting

The February and March meetings will at the shop of Terry Hill where he will be teaching segmented turning techniques. Te class will take place on Feb 11, Feb 25, March 11 and March 25.

Demos Needed

Camille Good has signed on to do the April demo, but after that all meeting date are in need of demonstrators. Please consider signing up to share your knowledge and technique.

Thanks

Thanks to this months contributors Camille Good, Chuck Kuether, and Paul Snyder for the excellent pictures.

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