

Topics to be covered

1. Stones-How to crush and process
2. Patterns-creating/transferring
3. Carving the pattern
4. Filling with stone
5. Sanding the stone
6. Colored wood shavings?

I suggest starting with Craft Supplies



 View Larger  Multiple Views



Turners Select Crushed Stone

Our price: \$5.85 – \$14.50

[View Product Details](#)

Color:

Select 



Select options above to check availability

MINERALS FOR INLAY

Prepared by Stephen Hatcher ~ summitdesign@comcast.net ~ www.stephenhatcher.com ~ (360) 915-9008

Mineral	Azurite	Biotite	Calcite	Chrysocolla	Dolomite	Fluorite	Howlite	Malachite	Turquoise
Common Name	same	Black Mica	Alabaster	same	same	same	same	same	same
Color	Deep Blue	Black	Light blue, green, red, orange, black	Light blue to green	White, pink, brown	Purple, red, green, blue	White	Green with streaks	Blue, green
Color Depth	Excellent	Medium	Poor	Excellent	Medium	Poor	Excellent	Excellent	Excellent
Clarity	Poor	Medium	Excellent	Poor	Medium	Excellent	Poor	Poor	Poor
Hardness	3.5 - 4.0	2.5 - 3.0	3.0	2.0 - 4.0	3.5 - 4.0	4.0	3.5	3.5 - 4.0	5.0 - 6.0
Image									

Color depth refers to how well the color is maintained as the mineral is crushed into smaller sizes (or inlayed in a shallow layer). Clarity refers to how well the crystals reflect and refract light. Excellent clarity is needed for translucent inlays.

To research other suitable minerals try these on-line references or check books on mineral properties.

www.theimage.com/mineral/minerals1.html (an excellent site with mineral names, properties, and photos)

www.greatsouth.net/ (my preferred source for buying on-line and an excellent reference)

Look for minerals in the hardness range of 3 to 6. A fingernail is 2.5 and that's getting a little soft while quartz crystals are 7+ and much too hard. The best range is 3 to 4 as it will finish well with hard woods like maple and cherry yet be durable. There are many options.

Bulk Stone Available



Fake stones might not work.



Crushing your own stone



Many Sources

EBay

Gem Shows

Quarries

Local clubs

Train rail and sledge on ridged surface-
Eye and lung protection required at All
times!



Stone Crushers

Capped $\frac{3}{4}$ " inside
of capped 1.5"-
avoid galvanized



Other stone crushing methods

- Steel bar and metal coffee pot
- With some stones(Calcite) hit it only once or twice and you will retain some large chunks otherwise, you will powderise it too fast. You can always hit it again for finer stone.

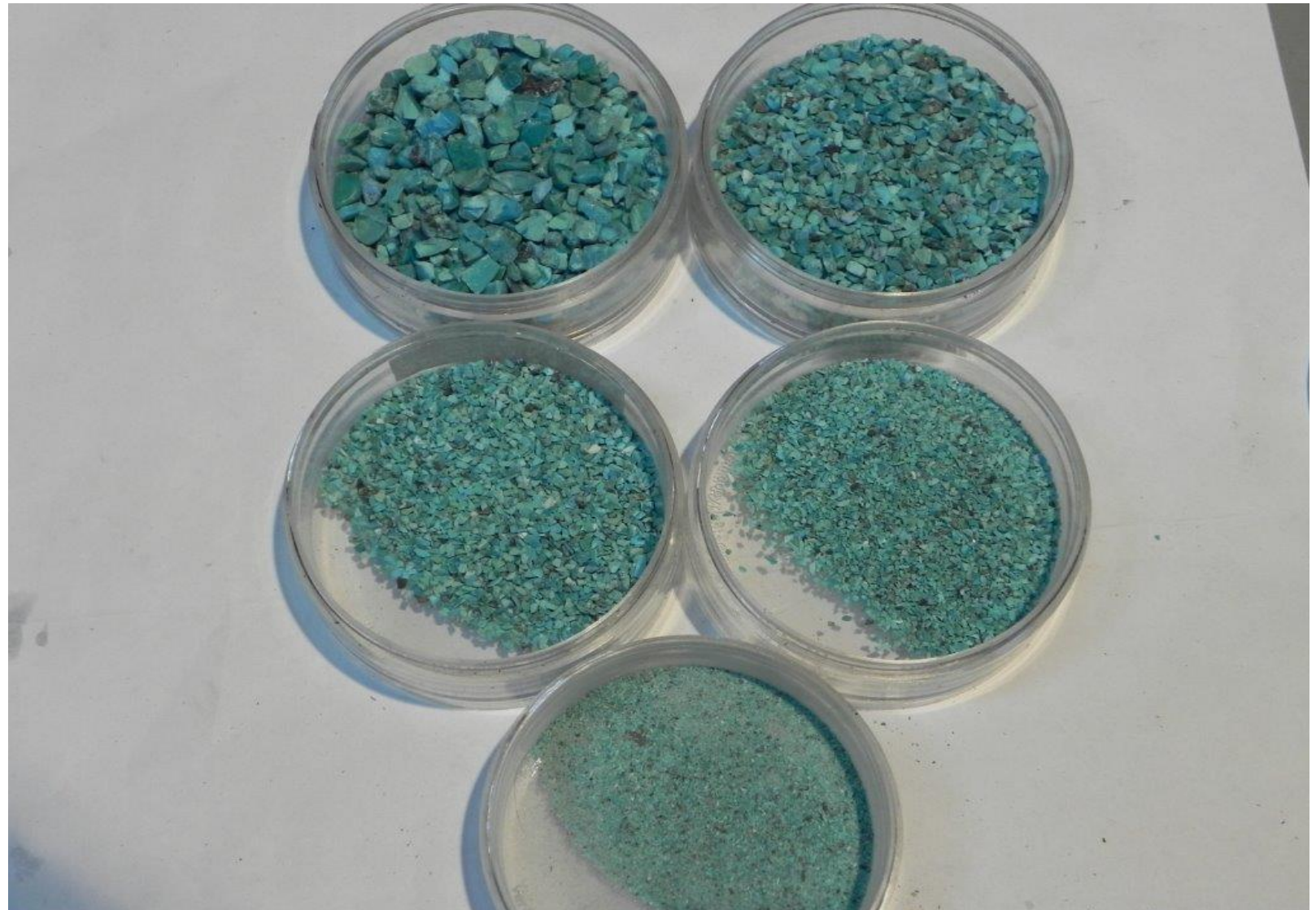


sieve/colander/strainer

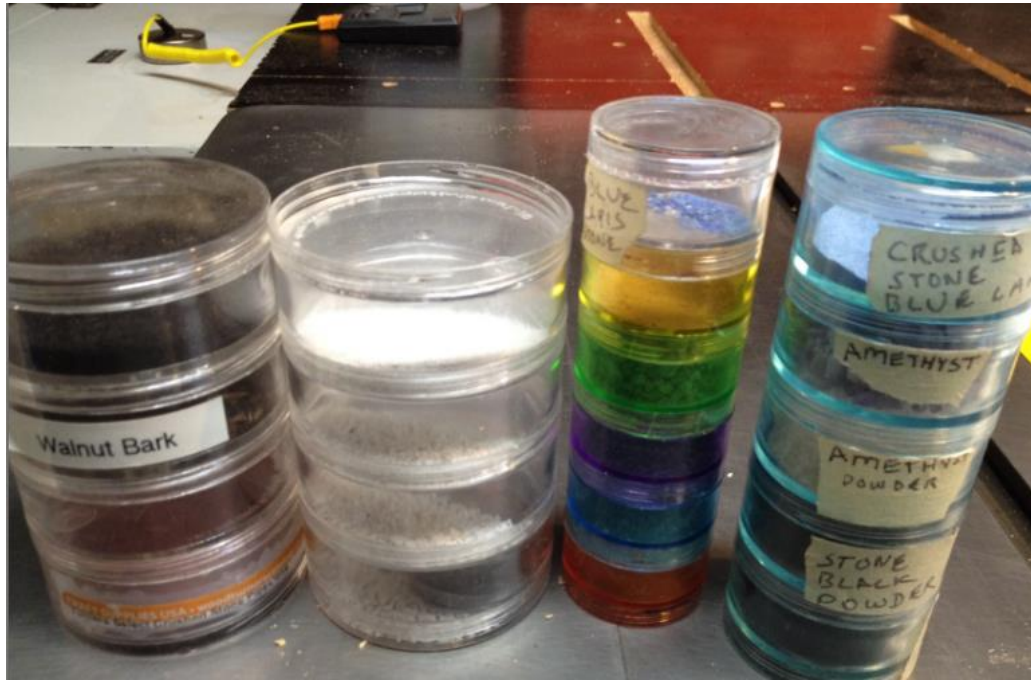


Found on E-bay for
\$18

Different size stones based on sieves or colanders available



Stacking Storage



Clear is best. Not too large

Lee Valley

Stone Applicators-Any tubing



Pen insert

Soda straw

Swizzle stirrer

Mixing Black and turquoise

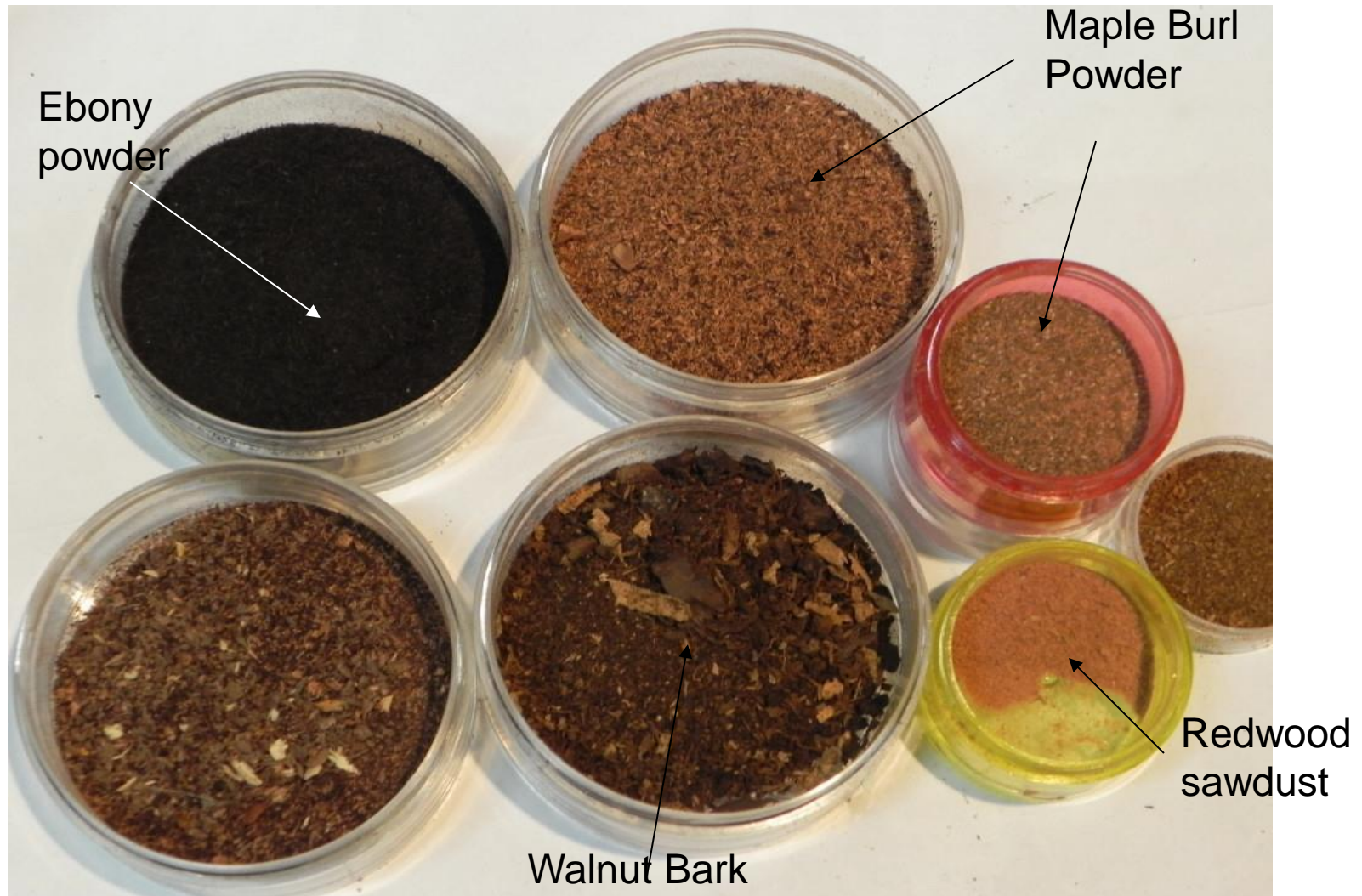


Mixing large white with fine black

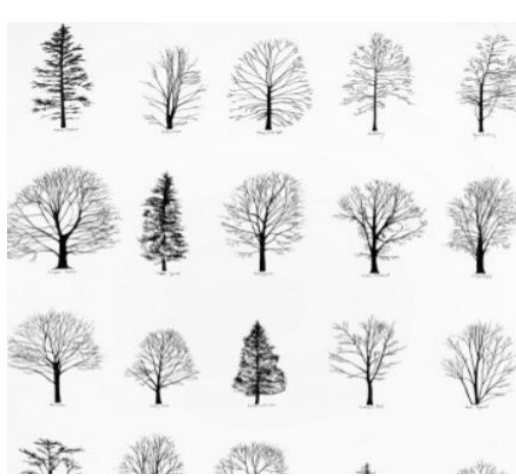


Pick colors that will be visible on the wood.

Can use wood shavings or other materials as well. Coffee grinder etc



Finding Patterns-Unlimited Options



Google "Images"

Carpet/Table cloths



Nature photos



Transfer paper-various colors



Saral Transfer Paper 12in
Wide - 12 Foot Roll
Graphite Color



Saral transfer rolls are wax-free, non-toxic, acid free paper allows you to transfer your design from a sketch, pattern, template or free hand to any surface; for tracing or ... [more »](#)

\$10.29

+\$0.90 tax and \$4.99 shipping

 [Blick Art Materials](#)



Choose a color or method which will show up on the particular color of wood that you are working with.

White shows well on Walnut
Transfer paper is more visible than this particular pencil

Various cutters available

Rotary cutting burrs-Carbide and coarse



Non-loading structured carbide coating



Not the smooth diamond coated-They do not cut.



Various Carvers

- Dremel



- Foredom



Laser engravers?-
accuracy? Issue on curved surfaces? Machined look, not organic? May be better than by hand for perfect curves such as Celtic patterns. Re-zeroing between colors

- Black and Decker-around \$35

Foot controllers available for all models



Dremel compatible-Cutter depth Control Bases



Around \$14



Hard to use on curved surfaces!



Around \$50

- Depth of cut-3/16” for translucent materials.
- Shape of recess -Undercut not required, but a perpendicular to surface cut is good.
- Gravity can be a challenge on curved surfaces. Damns and repositioning of piece required
- Painters tape when hole goes all the way through wall.

My 8 year Old Niece! Carves Our First Piece



Design cut right through
attached photocopy (glue
stick)



Nice, But missing Something Special



18"x 4 1/2" Maple Burl

Pattern cut in 18" Maple burl



Pattern cut in Maple burl



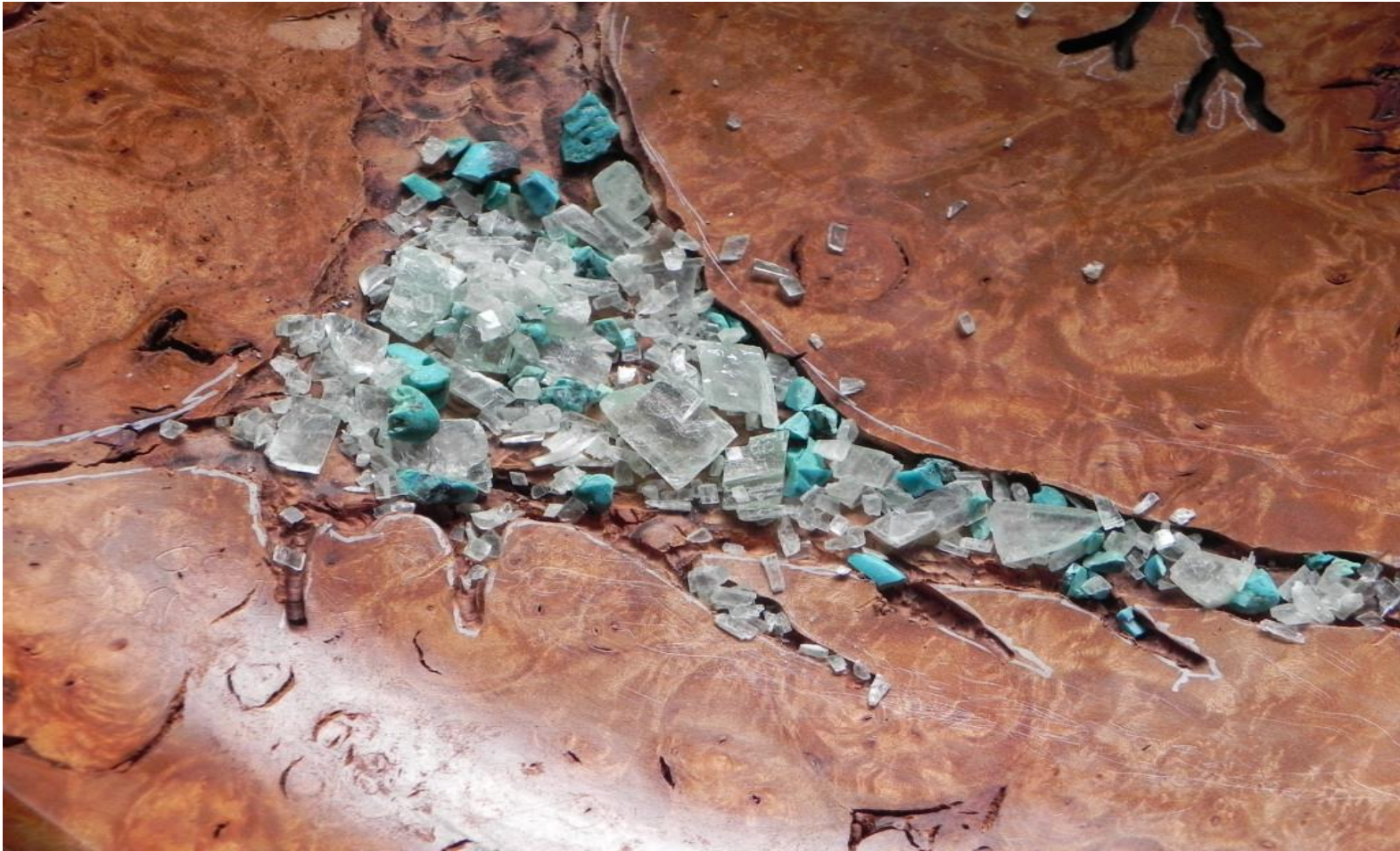
Large Calcite stone placed



Large Turquoise stone added



Smaller Calcite added



Black powder added and vibrated
(optional)



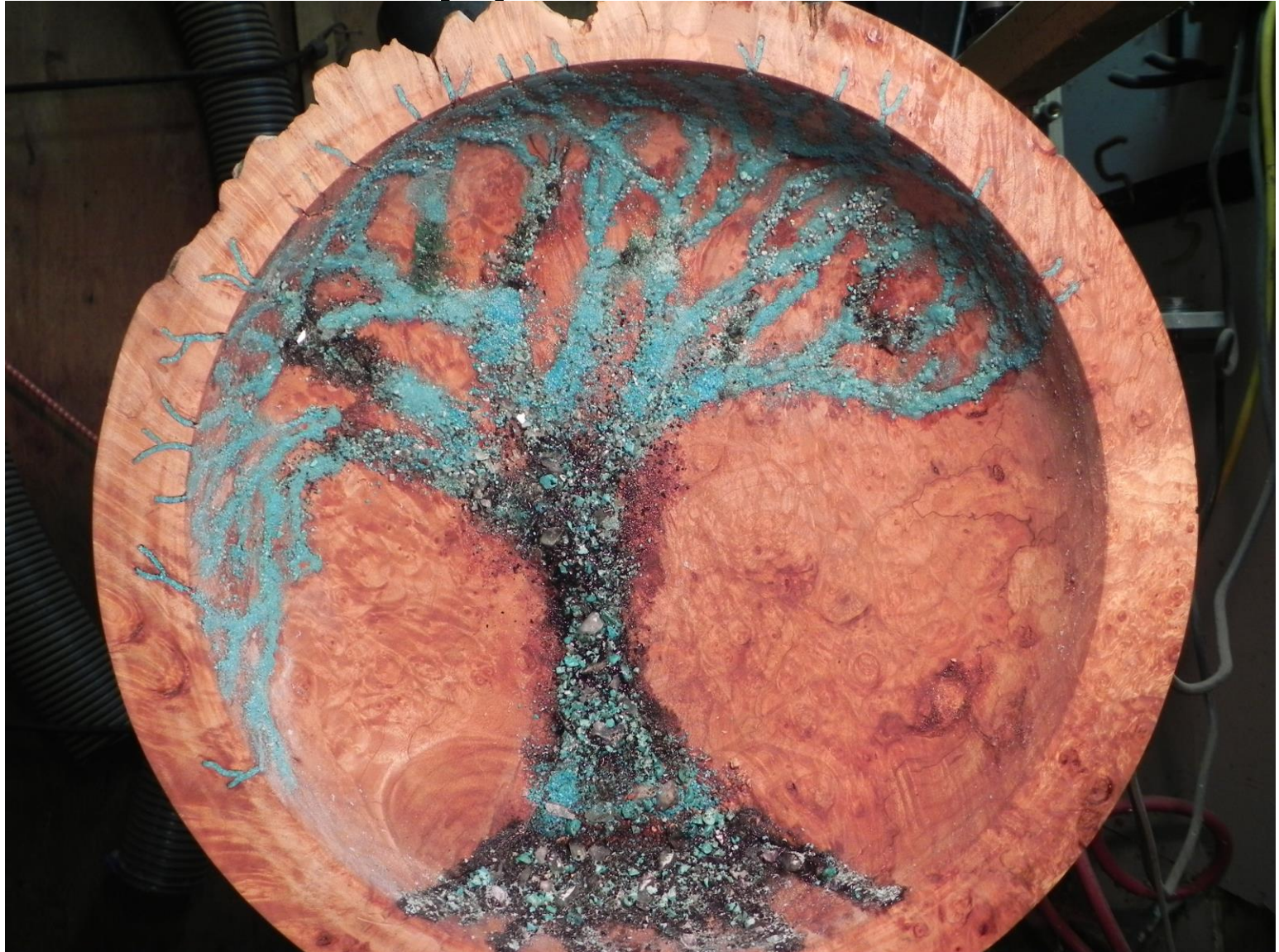
Rest of tree filled with smaller
mixture of fine black and turquoise



CA applied all over-Good
Ventilation required!



CA applied all over



Some Special Sanding Discs



**Cubitron sanding discs-PSA at
Craft Supplies.**

**Hook and loop at The Sanding
Glove**

3"=\$8 per 10 and \$35 per 50 each



**Designed for fast leveling
on stone inlay, glass,
ceramics, non-ferrous
metal, etc**

2"=\$18 and 3"=\$38

Tips

- Wood Selection-Preferably a hardwood so excess sanding does not remove neighboring wood as fast as if it was a softwood.
- Sanding pad Selection-Stiff/Ridged backing so it hits the stone only and does not conform around the stone and remove wood.
- You can use gap filing CA to fill spaces/voids.
- Use CA dispenser tips for accuracy.
- Don't keep trying to squeeze the CA bottle for large areas. Turn the bottle upright and let some air into the bottle and it will come right out

Shellac between layers-Always



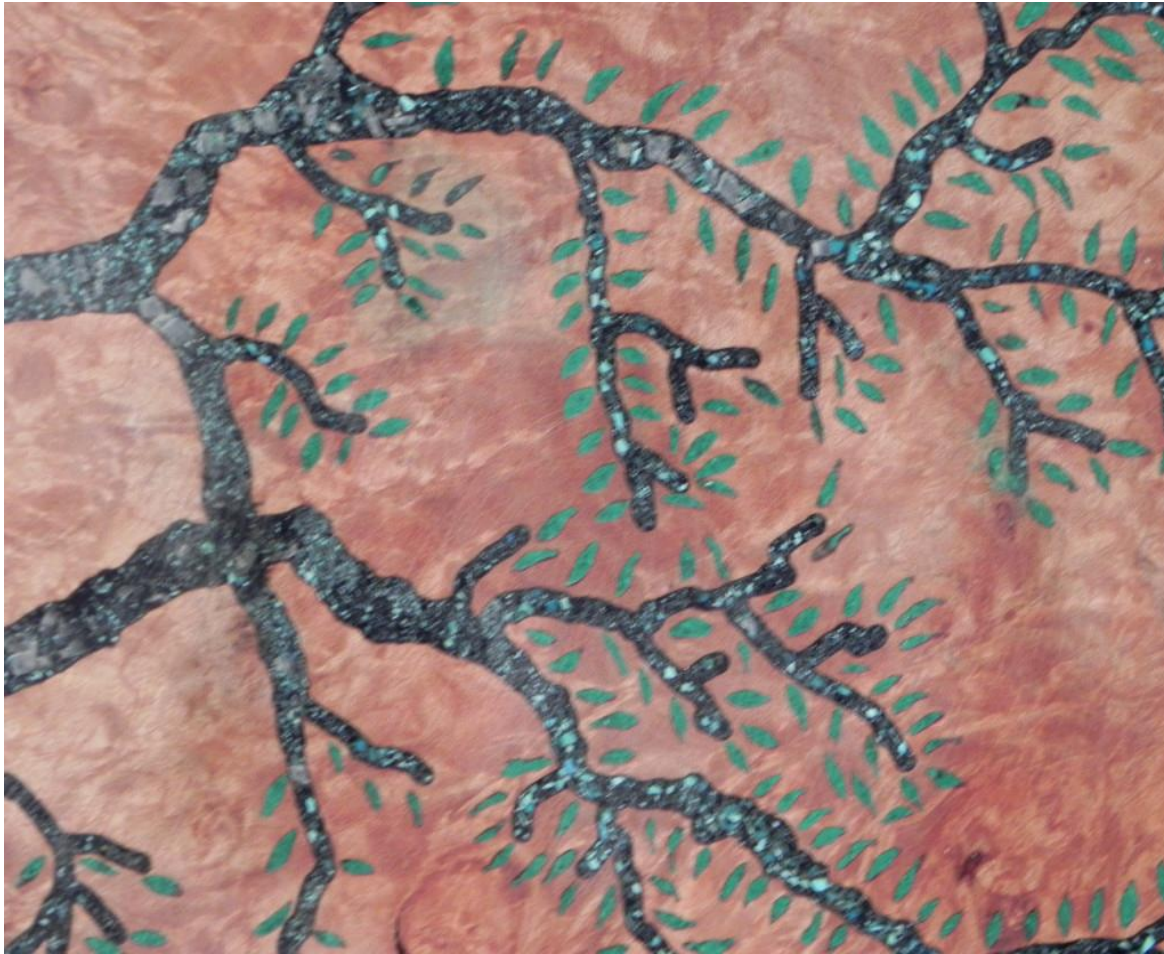
Fill small holes after shellac and
rough sanding-repeat



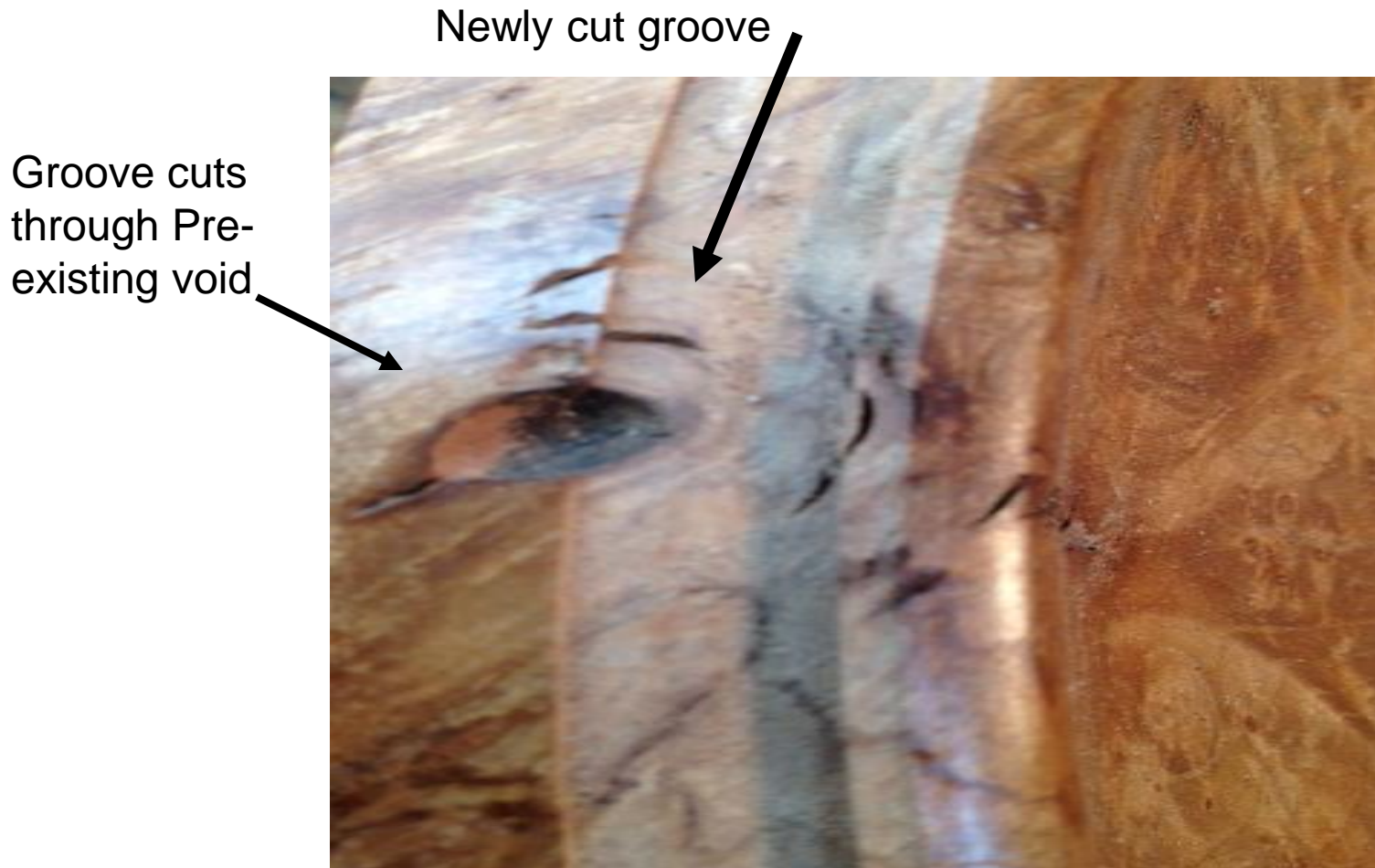
Leaves milled out and then filled
with fine Malachite



Leaves filled and rough sanded



Fill all voids in piece before cutting any patterns or grooves etc!



Fill to edge of crack



Saturate with thin CA



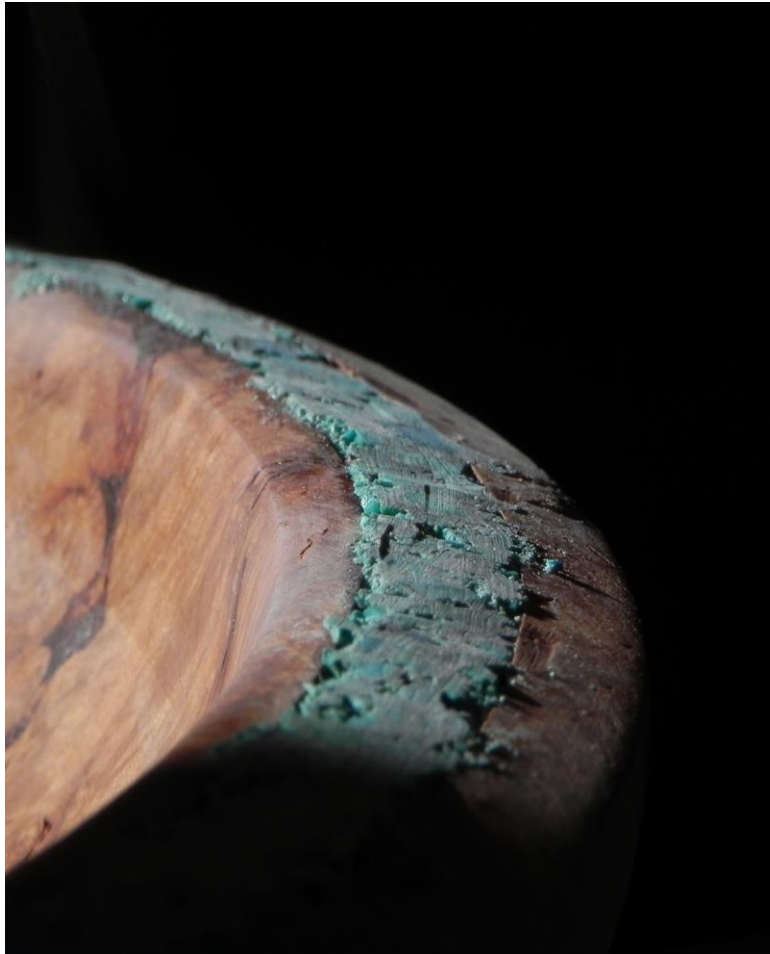
First pass used diamond wheel (Harbor Freight) to level the big stuff-Stay Away from
the wood!



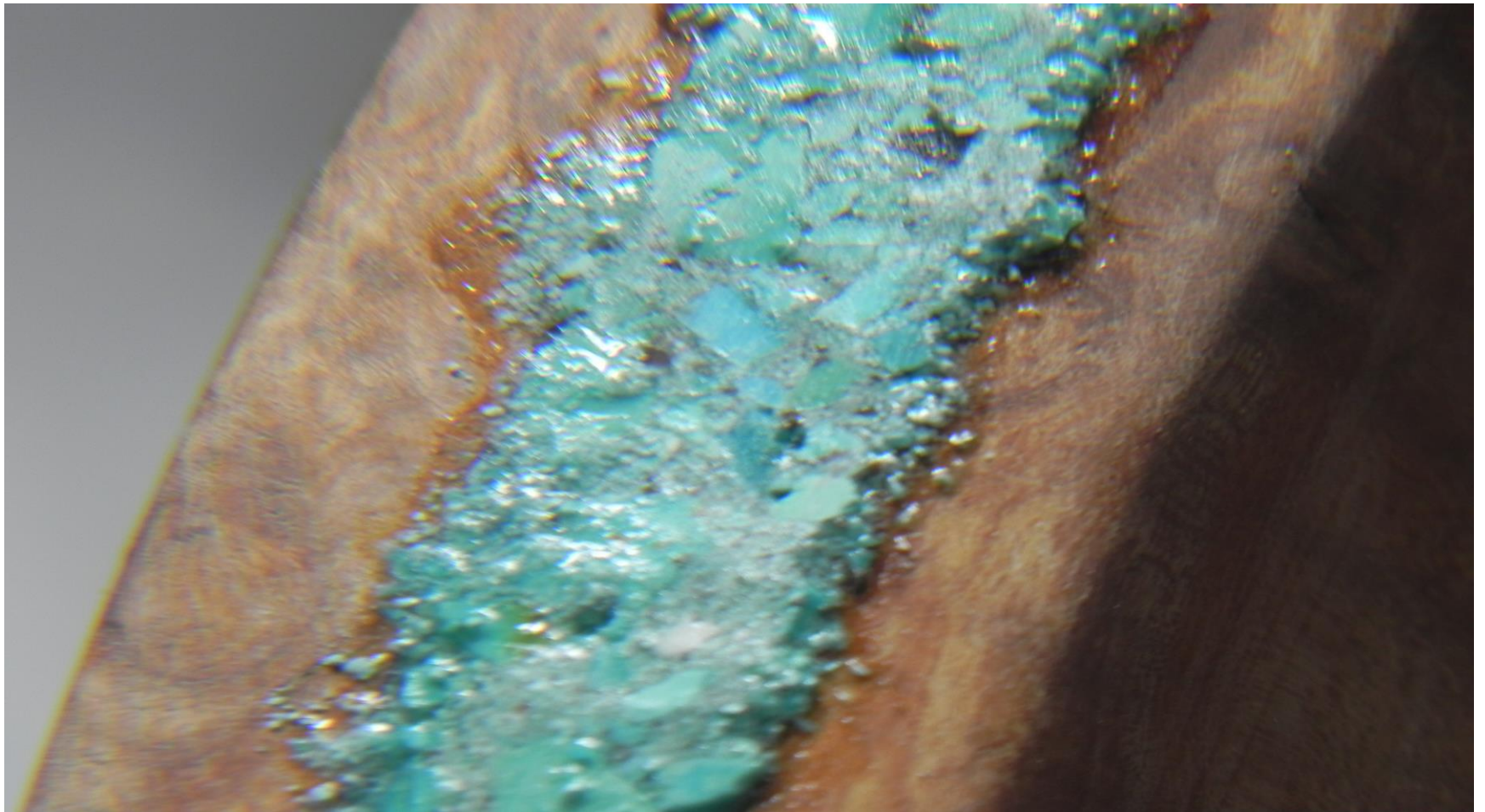
Ventilation or dust collection and
mask and eye protection required!
Gloves are also smart



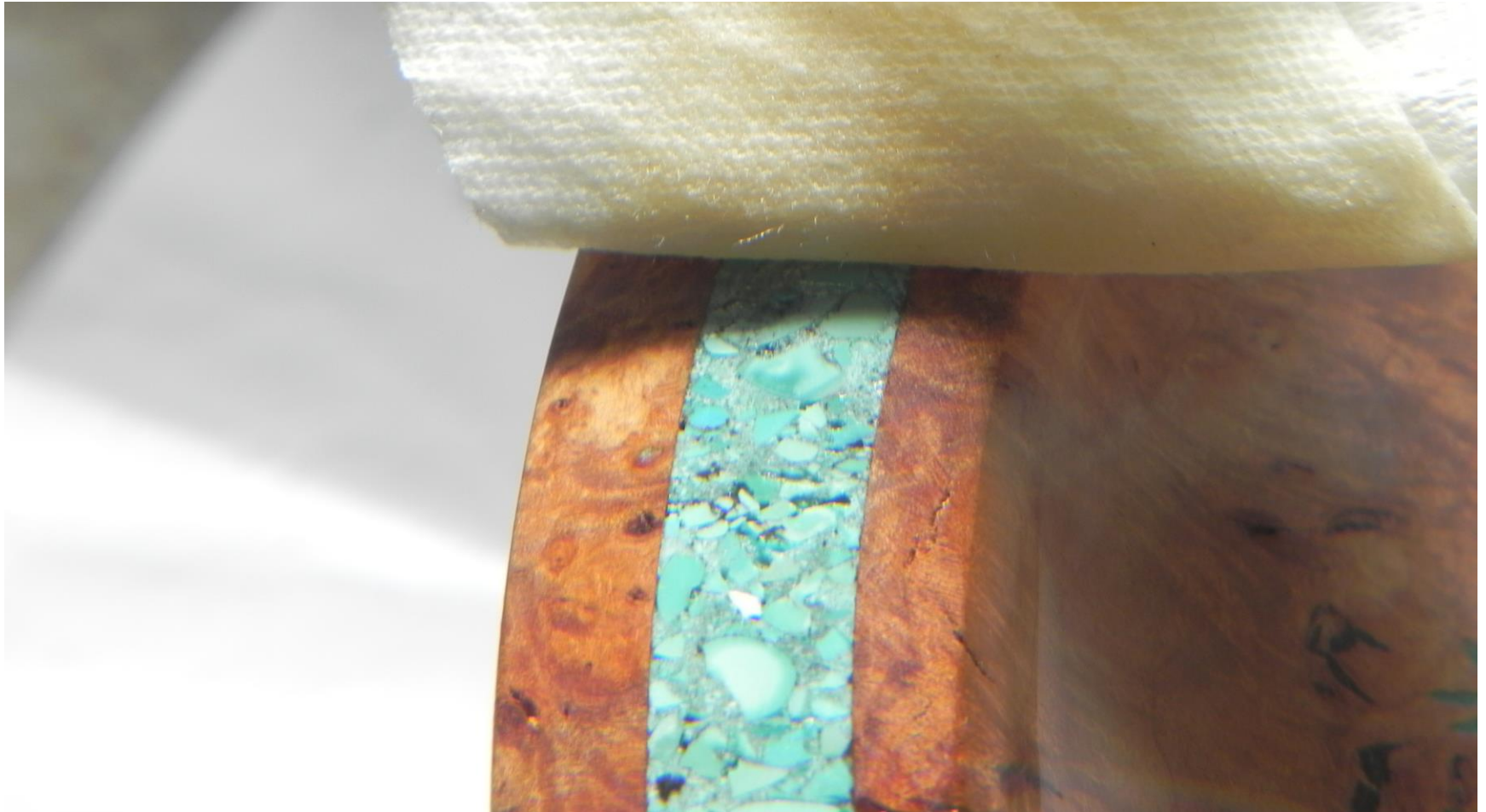
After rough grinding with flat diamond wheel-(Optional)



Fill all gaps and voids with fine stone and thin CA (after shellac)



Shellac after sanding and before filling
each layer-so that the CA does not
penetrate and stain the wood.



Good Lighting and Ventilation required-
Magnification also very helpful.



Ventilation required-Box fan and open door/window desirable



Finished Piece



Finished Piece





How many hours required?

Do you love to sand?

- Times are very approximate-lots of breaks-10-30 minutes of work at a time. I am not real fast.
- Create draw/transfer initial pattern 20-30 min
- Mill/carve out tree pattern-40-60 min
- Fill tree with stone and CA-15 min
- Sanding the rough tree with 80 Grit-30 min
- Repeat 3 and 4 multiple times-30-45 min
- Carve the leaves-1.25 hours (shoot me)
- Fill leaves with stone and CA-15-20 min
- Sanding and repeat filling leaves 45 min
- Filling Rim, sanding and repeat multiple times 1.25 hours
- Final sanding to at least 600 grit on Stone-20-30
- Total about time about 5-7 hours

Colored wood dust



Light wood shavings



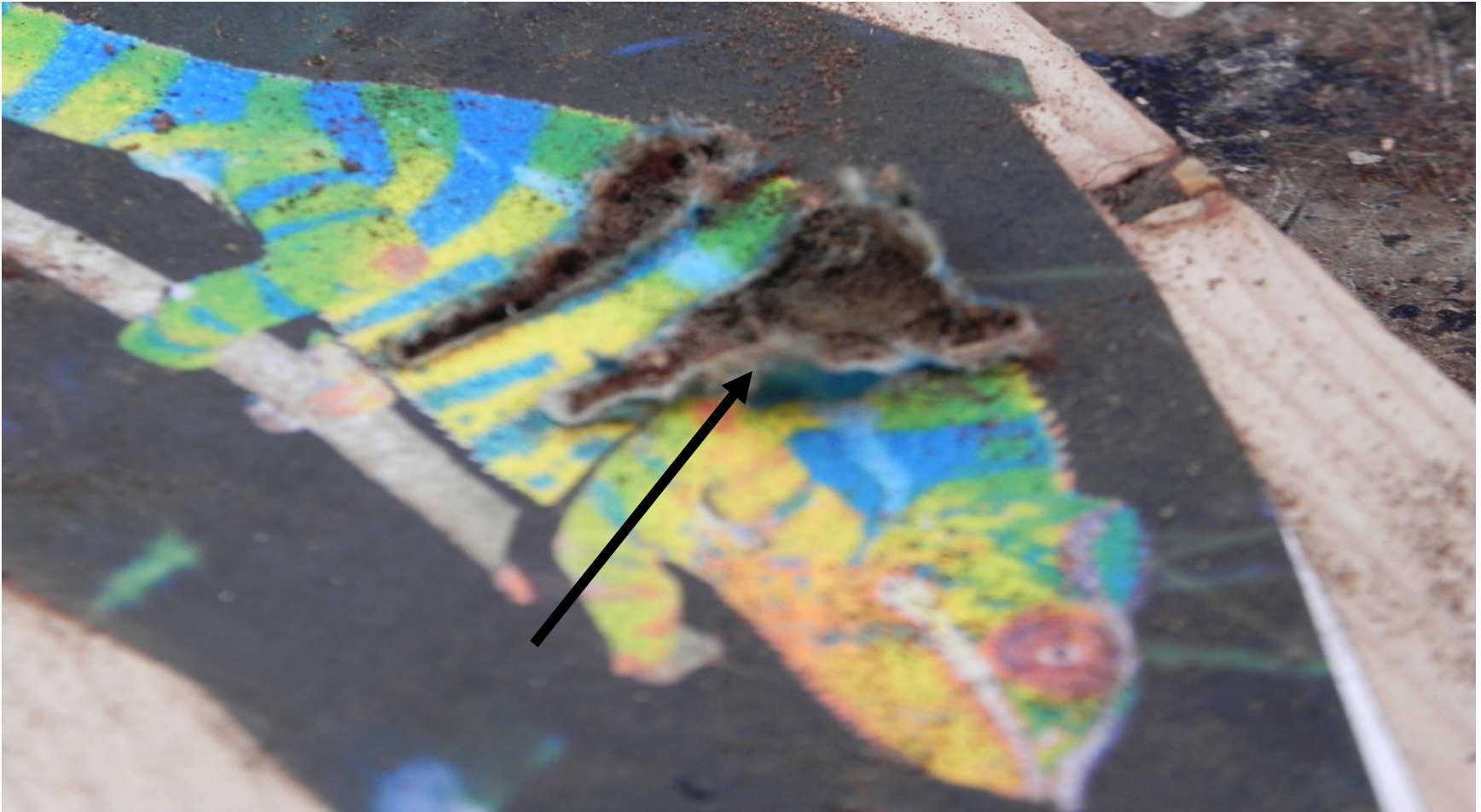
Filter out the fines



Image glued on



Dremel tears up edges of image



Used transfer paper



Roughly copied picture



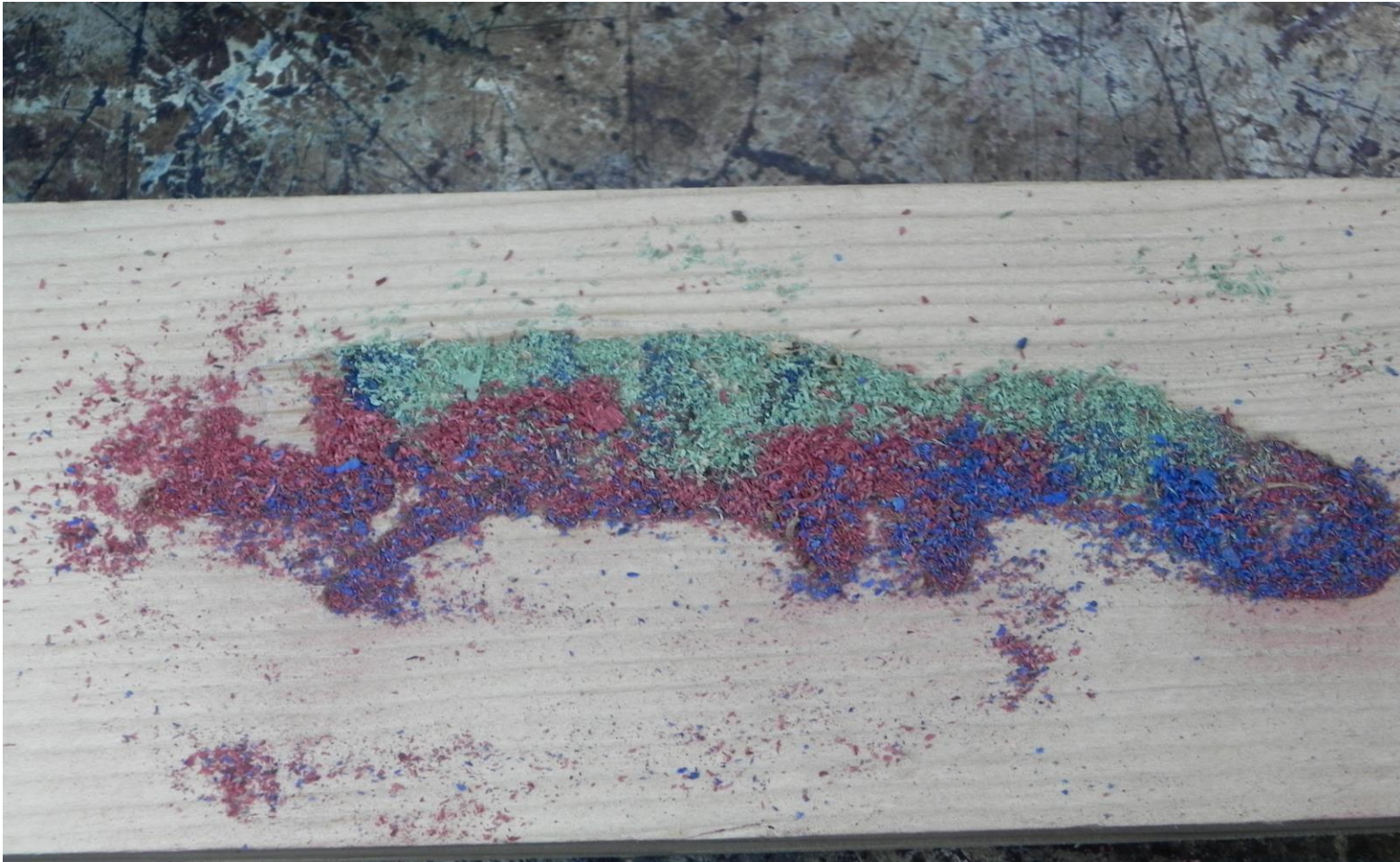
Dremeled and filled first color



Dremeled for second color



Dry filled with other colors



CA saturated wood dust



Final Sanded-Colors are hard to create,
grainy finish, but shows some promise



Not limited to open forms!



Stephen Hatcher hollow form