Conifer Sap...an unwelcome inspissating challenge and one solution

Wells Shoemaker, Santa Cruz Woodturners. Late December, 2021

Short version: A workaround to salvage handsome bowls from sap-oozing Norway Spruce.

Norway Spruce blanks roughed out, some cored, and drying—larger ones 18-20”

Woodturners tend to favor deciduous hardwoods for lots of understandable reasons—beauty, durability, clean cuts, occasionally rapturous figure, tradition, and the pleasure of translucent ribbons floating in the air.

Conifers have a lower desirability it seems. Conifer wood tears out easily, especially with even a slightly dull tool. It chatters on the knots, dents when you drop it, and soaks up finishes like a sponge. It just doesn’t have the cachet of a feathery walnut crotch or a silky madrone platter or a quilted maple lidded bowl. Fair enough, but wait....

On the other hand, **it's a lot easier to find a 20" diameter blank** of a conifer than a hardwood around here. For example, Douglas Fir comes plenty big, and it comes down often. It seems disrespected, perhaps because it's so "common" or because it chatters against steel or sands into ripples. I'd assert that the enchanting contrast between summer and winter growth, especially in a pith-side-down bowl with concentric ovals, would be regarded as precious if it came from an endangered rain forest.

Redwood obviously needs no introduction or apology. Monterey Cypress grows fast, often reaching 3-5' diameter, and since it is not regarded as sacred, we turners can score big blanks if we're fast. (Ever see one of **Chuc Nowark's** breathtaking Cypress bowls? [1]) Cedar and pine may not be comparable, but there are still other choices.

In the early Spring of 2021, my neighbor took down an 80 foot **Norway Spruce,** once upon a time a living Christmas tree but now an unwelcome obstacle to the only shaft of light reaching his house. It's not a native species, but Norway Spruce is famous for growing nearly perfectly vertically, a prized feature for masts in our nautical past. It's dimensionally stable, quite strong for its weight, and it springs back after bending.[2]

I got the entire tree for the mere cost of 3 days with a saw, yielding close to 200 blanks (counting cores and quartersawn lengths). Most of them were in the range of 15-20" diameter. It dried quite fast...down to my shop equilibrium of 14% moisture content in 7 months. Warping was minimal, with not one of the sealed blanks suffering splits.

I finish turned about 20 large platters and shallow bowls, a fragrant and satisfying experience. I noticed no sap ooze while turning, and it sanded to 320 without clogging the paper. I joyfully applied finish and praised the smoothness and the ergonomic heft.

Nothing like feeling home free! Of course, that's when reality showed up. *Bonk!*

Sap started seeping out of the winter growth rings of the central wood (not the sap wood!), and that was righteously sticky stuff! I realized that, while the cellulose was cured, the viscous sap lost moisture more slowly and had not crystallized yet.

I couldn't bear to lose all that work, but these vessels were not serviceable with goo oozing, sticking to the table, collecting lint, and offending the Resident Director of Homeland Equanimity.

[1] Check out Chuc's Gallery Link: Galleries - SANTA CRUZ WOODTURNERS (scwoodturners.org)

[2] In 1947, Howard Hughes built the frame of his breakthrough huge, amphibious airplane with birch, but it became known as the Spruce Goose. My homebuilt kayak in 1958 had a real spruce frame!

I asked some of our experienced club members what they might try, and there wasn't much hope offered. They were too polite to exclaim: *What were you thinking! Spruce?*

<u>This is the solution that seems to be working:</u>

1. I put the offending bowls in a ventilated stack upstairs near the wood burning stove, where it's lots warmer than my shop this time of year.

2. I figured that the amount of sap trapped inside must be finite with a mere 10-11 mm wall thickness, and it couldn't keep oozing forever. I hoped that most of it would find its way to the surface in a month or two.

3. Ooze they did! Once that seemed to stabilize, I took them back to the shop and attacked the sap with steel wool and mineral spirits. Sandpaper would have been a fool's errand. I learned quickly that the first passes needed to be performed with coarse grade steel wool (#2), as the finer grades clogged instantly.

4. The first pass took down about 80% of the ooze, now easily spotted as shiny lines along the annual growth rings but not macro globs of amber.

5. A second pass took that to maybe 95% resolved, but the last 5% was stubborn.

6. I did a third pass, this time with 2 changes. I used a finer grade steel wool (00), and I switched solvents.

   I had hoped to use turpentine, honoring the pine pitch origins of turpentine, but Ace no longer carries that product.

   I bought an odor free solvent, and by golly, that proved much more effective than the stinky variety mineral spirits.

   Expensive, but not money wasted.

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Seems OK now.

Afterthoughts: The oozing occurred *after* I had applied a penetrating and polymerizing sealer (General Finishes Wood Bowl Finish). Rubbing over that finish with coarse steel wool and solvent did blunt the sheen of the finish, but the solvent and the stains did not penetrate. I'll sand and recoat once I'm sure we're done.

For the stack of roughed out blanks waiting in the wings: I'll let them rest for a year and do a test bowl before turning them.

Bonus! I rescued the bowl which rendered the image of my daughter's new dachshund puppy, named **Coco.** Better a late Christmas present than a sappy story!

Come to think...it's a Coco Bowlo!

Cheers, and Happy New Year!

Wells