

## Turn North



The Monthly Newsletter of the Northland Woodturners

#### www.northlandwoodturners-kc.com

May 2021

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#### **Chapter Meetings:**

First Thursday of every month, 7-9 pm. Our ADDRESS: We're south of Zona Rosa just off NW Prairie View Rd., in the old Mid-Continent Library building on the top floor.

Parking is on top of the hill off Tower Drive.

**Coming Attractions** Newsletters on the Chapter Website: http://northlandwoodturners-kc.com **Event Information:** 

**NEEDED:** Fund raising Ideas.

Remember—2021 dues are \$10 for the year. Due beginning January 7, 2021

> **Next Meeting:** May 6, 2021



**Oak** – Quercus spp.

The Oaks form a large group (genus) with a worldwide distribution. Most are trees but some are shrubs. One estimate calls for 450 species in the world; another, more modest, calls for 275, yet Wikipedia boasts 600 species. In North America, north of Mexico, there are about 54 species of oaks, 21 of which grow wild in Missouri. This abundance of American oak species compares with just three to five in all of Europe. There are also several species described as oak which are quite unrelated to true oak. (See last paragraph on next page).

The oaks comprise the most important group of hardwood timber in the United States, including Missouri. No other wood is more widely used. Oaks are divided into two subgroups, the white oaks and the red oaks (which includes black oaks). Missouri has seven white oak species and 12 red oaks as well as some additional hybrids. There are notable differences between the subgroups. The following chart lists some of the distinguishing features of white and red oaks. (*next page*)

Feature	White oak	Red oak
Acorns	Mature in one season	Mature in two years
Leaf lobes	Rounded	Bristle-tipped
Heartwood color	Tends to be tan or brownish	Tends to be reddish
Heartwood pores	Have abundant tyloses	Have few tyloses
Fresh-cut odor	Distinct, but not unpleasant	Sour, often unpleasant
Summerwood pores	Small and numerous.	Few.
	Cannot be counted with hand lens.	Can be counted with hand lens
Annual rings	Usually compact, resulting in a	Usually widely separated, resulting in
	finer textured wood.	coarse, textured wood.
Durability	Quite durable	Not particularly durable

The white oak group here in Missouri includes species such as; **White Oak** (*Quercus alba*), Post Oak (*Q. stellate*), Bur Oak (*Q. macrocarpa*), Swamp White Oak (*Q. bicolor*), Chinkapin Oak (*Q. muehlenbergii*), Swamp Chestnut Oak (*Q. michauxii*), Overcup Oak (*Q. lyrata*), and Dwarf Chestnut Oak (*Q. prinoides*).

The Missouri red oak group includes; **Northern Red Oak** (*Quercus rubra*), Shumard Oak (*Q. shumardii*), Black Oak (*Q. velutina*), Blackjack Oak (*Q. marilandica*), Pin Oak (*Q. palustris*), Northern Pin Oak (*Q. ellipsoidalis*), **Scarlet Oak** (*Q. coccinea*), **Southern Red Oak** (*Q. falcate*). Cherrybark Oak (*Q. falcate var. pagodifolia*), and Nuttall Oak (*Q. texana*). Also in the red oak group are oaks that have entire (unlobed) leaves that include; Shingle Oak (*Q. imbricaria*), Willow Oak (*Q. phellos*), and **Water Oak** (*Q. nigra*).

While there is one particular species that's commonly considered *the* White Oak (*Quercus alba*), and one particular species that's considered *the* Red Oak (*Quercus rubra*), in reality, oak lumber is not sold on a species level. Instead, it is sold under a broader species grouping; either red or white.

Identification of the oak groups, white or red, in tree form can be done by the tree's leaves themselves. The red oak's leaves have pointed lobes and the white oak's leaves have rounded lobes. Besides the leaves, there's a few other ways to distinguish between the two groupings of oak wood. When looking at the endgrain, the large earlywood pores on red oaks are open and empty. The pores of white oaks, however, are all plugged with tyloses (bubble-like structures), a feature that makes white oak impermeable and able to hold liquids and withstand weathering. When looking at the face grain, particularly in the flatsawn areas, the thin dark brown streaks running with the grain direction are rays. Red oaks will almost always have very short rays, usually between 1/8" to  $\frac{1}{2}$ " high, rarely ever more than  $\frac{3}{4}$ " to 1" in height. White oaks, on the other hand, will have much taller rays, frequently exceeding  $\frac{3}{4}$ " on most boards.

As is the case with many other woods, there are woods named oak that are not true oaks belonging to the Quercus genera. Many of these are from Tasmania and Australia whose early settlers found several tree species which produced timber having superficial resemblance to the oak with which they were familiar in Britain. They therefore gave the familiar name to Australian silky oak which comes from two distinct species, *Cardwellia sublimis*, and a smaller tree, *Grevillea robusta*. Three species of *Eucalyptus* in Tasmania, *Eucalyptus regnans, Eucalyptus delegtensis* and *Eucalyptus obliqua*, also provide a timber which is exported as Tasmanian or Victorian oak.

Similarly, the term Bog Oak is not a specific oak species, but is rather a term that designates oak wood that has been buried in a peat bog for hundreds or sometimes thousands of years. The conditions in the bog protect from normal decay while mineral reactions with the tannins in the wood, gradually give it a distinct dark brown to almost black color. Though Bog Oak does not describe a specific tree, it tends to most frequently occur in the United Kingdom, with English Oak (*Q. robur*).

Brown Oak, likewise, is technically not a distinct species of oak, but rather refers to oak – almost always English Oak (*Q. robur*).or other European species – that has been infected with beefsteak fungus, which has the effect of turning the wood a deep brown color.

Oak varieties are very workable, can be glued easily, stained and finished well. Due to the high tannin content, it can react with iron (particularly when wet) and cause staining and discoloration. And the longevity of items made from oak can be attested to by the history of the ship *USS Constitution* (Old Ironsides) which is well over 200 years old and was only just a year ago taken out of the ocean and put into dry dock for maintenance.

You can read more about Oak at; Oak on Wikipedia or Oak species on Wikipedia and on The Wood Database .

#### Written by – Mel Bryan



# Program Highlights

Club Treasurer Chip Siskey was the featured presenter at the April Northland Woodturners meeting. His topic was **spiraling** on a turning. Chip showed several types of spiraling tools and the effects on both the end and longitudinal edges of a turning. Spiraling is not limited to flat surfaces either. Different inserts give different results.





At the left, Chip is showing two tools in his repertoire of spiraling tools and how it sits on the tool rest in the right large photo. At the far right on top is a small tool of a different design. A flat spot (shiny oval) allows the tool to be held at a constant angle when "spiraling" a turning.



Chip showed his tool similar to the one on page 3 on the right with the 4 spiraling wheels. The one at the top on the far left is a coarse, the one at the top in his hand is a medium, and the one in the middle of the left picture is a fine. The one at the bottom is a different wheel and produces a different pattern called texturing , is beveled on both sides and the edges come to a point on each "projection". It is used to give a more "orange peel" effect when spiraling a turning.





One example of spiraling is this utilitarian tool handle . To dress it up a little, add some additional design and don't go quite as deep with the spiraling.



First step was to turn a round blank from a square blank that looks to be about 2-1/2" square. Then a tenon was turned so that the blank could be reversed in the chuck. Chip used Maple for the blank.



Chip then set the tool rest so that the points on the spiraling tool were in the approximate horizontal center line of the turning so that the pattern would be placed correctly on the piece.

In the inset picture one can see the angle of the tool as Chip adjusted the tool rest.

The tool rest has to be far enough away from the turning that the wheel can spin freely and not touch the tool rest.

Speed needs to be under 500 RPM for the tool to work. There is a sweet spot when the tool contacts the work that must be found. It may take some trial and error to find when. Too light and the pattern doesn't show up, too heavy pressure and the tool may not work at all.



As Chip inspected the initial starting, pattern can be seen appearing in the center picture above but one side was not even. So...trim off what was started and begin again. Practice is a good thing when learning to spiral.



One can see the distance back from the work for the tool rest in the photo at the left. Also the angle of the tool to the work is more easily seen in this picture.

At the right, the pattern begins to show more obviously this time.





It becomes one's choice whether to leave the tops flat or go deeper to produce the rounded surface seen on the upper piece in the photo at the left.



Using a different tool, this time with a bearing in the center, Chip proceeded to angle the tool the other direction producing a herringbone design next to the original indentations.

Note that when overlapping the original indentations, a diamond pattern is produced. The tool has numbers to allow setting for a specific angle when producing the spirals







Initially, the flat side of the spinner was up giving only a small design in the center. Rotating the tool to put the bevel side of the spinner up gave a different pattern.

While creating the second pattern on the end, the flex of the tool up and down while pressing in caused some deflection resulting in an uneven

pattern. It was not smooth (*see left photo above*). Going back to the longitudinal side, the pattern was much closer and gave a smooth spiral pattern similar to the far left pattern in the middle photo (*see right photo above*).



Changing to a different tool still gave the same uneven result on the end of the piece. Note the bevel is up on the left photo.



This is a good look at the flat guide on the bottom of the spiraling tool that keeps it flat and a constant angle while pressing into the wood.

This can be adjusted to different settings to vary the spacing and pattern produced as well as direction of the spiral on the work piece.

Northland Woodturners Club News



Trimming on either side to form a bead leaves the bead showing either an angled spiral or a diamond design on the outer edge of the bead.





Changing to a finer-tooth spiral wheel, Chip proceeded to form a new pattern into the piece of Maple. Note the angle of the tool to the work also and check the pattern produced. Bevel on the tool is UP. Also the tops of the grooves are slightly rounded to produce a smooth pattern.









Going toward the outside, this pattern is produced on the end of the slightly rounded end.

One final outside touching by the tool turned the other way produces these patterns too.









Parting off the "knob" produced and leaving the rest, a mark is made on the gouge for depth to hollow the remaining piece.

Hollowing out the piece provides interesting chips coming off. Once the depth has been reached the final cleaning and shaping of the opening takes place.





Using a box scraper Chip trimmed the inside of the hole to allow the "knob" that was previously turned to go into the body of the form being finished.





After cleaning up the end, trimming the shoulder for the knob to fit, and cleaning out the inside , a quick depth check provides info for parting off the finished piece.



Note the angle of the parting tool in the left picture. This allows a slight inverted base so the box will sit flat when done. Voila! The finished piece is parted off and in Chip's hand.



The finished piece in hand. To make sure a good fit is produced it is important to use a scraper or box tool to make sure mating surfaces are round and not egg-shaped.

Great Job Chip!

Thanks to everyone who has helped with our plug orders in the past. We will be asking for help getting other projects to raise funds. All ideas are welcome along with samples.

The CLUB NEWSLETTER tab of the club website is at <a href="http://www.northlandwoodturners-kc.com/">http://www.northlandwoodturners-kc.com/</a>

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