



Encouraging all woodworkers in self-expression, craftsmanship and knowledge

Colorado Woodworkers Guild

MAY 2019



President's Message

In my April 2019 message I talked about my upgrades to my shop dust collector. In the April 2019 Colorado CNC User group meeting the resident Safety Officer, Ron Malleck gave a presentation "Basic Protection from Wood Dust". His first slide and disclaimer as well as mine is:

Disclaimer:

The following presentation represents the partially-educated, anal and detail-oriented woodworker's OPINION. As such, this presentation only covers some of the basics and is meant only to stimulate, start and motivate an individual to begin steps towards better air in his shop.

Please be aware that local codes, state air regulations, etc. may affect your shop, *especially if it is runs as a business.*

May you have a safe and happy journey!

He presented multiple slides on: **You might be a dust sniffer if**

- You see dust around your nose after you take off your respirator.
- You clean yourself with compressed air inside your shop.
- You clean your shop with just a broom and dustpan.
- Your wife complains about wood dust getting in her house.

Woodworking is an Inherently Dangerous Craft

- **And that includes exposure to wood dust**



The Three Forms of Wood Dust:

- ① Wood dust you see on a surface
- ② Wood dust you see floating in the air
- ③ Wood dust you can't even see

Guess which one is the most dangerous?

What is your Wood Dust Reality?

- A. I'm so old, it's not important.
- B. I want a clean shop, but I'm cheap.
- C. I'm looking for a long-term woodworking relationship for myself and those around me.

Ever wonder how your shop might affect your home air quality?

An overall view of the issue:

- Managing a small shop's dust handling system can be simple and cost-effective but may not be that convenient.
- Stepping up to a more complex arrangement can get expensive (\$) and requires more caution.
- How can you be sure your system works?
 - You're Worth It - Start with a GOOD, COMFORTABLE RESPIRATOR – then learn when and where to use it correctly and for the proper length of time!
- Get a good quality 24" fan to help reduce the time you need to wear a respirator.

Let's Look at Clean and Cheap (1)

You can easily get good quality fine dust protection without much work or expense. A **respirator** and **good cross-ventilation** works & provides good protection. Here's how:

Let's Look at Clean and Cheap (2)

Yourself: Don your properly-fitted dual cartridge filtered NIOSH approved respirator before you start making dust – and keep it on until 30 minutes after you're done cleaning.

Your Shop: you need to run that strong fan in an open side door or window with your main door open 4-5" so you have good cross flow ventilation. Ideally, you'll roll your equipment next to the window or door with the exhaust fan.

Let's Look at Clean and Cheap (3)

Your Setup and Process: Take the time to think and study how your air moves through your shop. With just a respirator and fan, you'll likely have to determine which way the wind is blowing outside so that you can arrange your equipment and fan so the bad stuff leaves and stays outside.

Quality Assurance: Check how effective your setup and process work by using an air sampler (I have a Dylos). Then that process should work until something changes

Let's Look at Clean and Cheap (4)

Periodically every shop needs a significant clean-up with broom and dust pan, leaf blower, compressed air line, shop vacuum - whatever works.

Like before, you should don your respirator from just before you begin cleaning through 30 minutes after you finish your cleaning regimen. Then you can take your mask off and turn off the fan.

Thinking of Going More Advanced?

An independent, Bill Pentz, states that *getting safe air for our shops is relatively simple*, but previously it was easy to for an individual to overlook something and end up somewhere he doesn't want to stay:

"Not one *under 3 hp dust collector* or one *under 5 hp cyclone* that vented inside stayed below the relatively easy OSHA air quality maximum after sawing just 54 linear feet of MDF. Only eight of the twenty-eight shops I tested maintained airborne dust levels below OSHA standards. Only one major advertised brand of cyclone and one brand of dust collector succeeded, and **both ran without filters venting outside**. All six of the other cyclones that passed were either made from my design by the shop owner. Each of these cyclones not only passed the fairly easy OSHA air quality standards, all but one passed both the much harder ACGIH and medical air quality recommendations that are now the European standard. "

My opinion: Things are better now than when Mr. Pentz wrote this, but we still should be cautious and vigilant.

The challenge for the private woodshop operator

Equipping Private "Home" Shops with dust control can be tricky. IF there is no permitting, there is no air quality oversight – it's up to YOU to do the right thing.

1. **Don't just depend on a salesman** – instead find effective local professional shops and see how they made and keep their shops effective towards dust control.

2. **Look for qualified and independent resources** on the internet. Some may be dated or even opinionated but can afford to be – they've been in the field for years. In MY opinion, Bill Pentz' web site and work sheets are well worth considering.

3. **Check other private shops** AND confirm their performance. Does their dust collection system do what YOU want?

Going More Advanced (1)

Tools, Cyclones, Filters & Room Air Cleaners

Power Tools: Gathering dust right **at the point of generation** is the most effective. If the tool's dust collection isn't satisfactory, you might redesign it to be more efficient.

Ponder: vacuums are effective for just a few inches, but fans can push air for several feet.

Going More Advanced (2)

Dust Cyclones come in several designs, some of which work better than others. Can you trust the salesman?

Dust Filters need a **cyclone** or **pre-filter** ahead so that they don't tear / foul / fail too quickly. I only trust cartridge filters from an ASHRAE certified independent testing lab.

Going More Advanced (3)

Room Air Cleaners – Older/cheaper units were made to make your shop look clean (no dust nibs were their goal back then). Today any set of filters should remove wood particles down to 1-3 microns. Watch for their percent capture at their rating too. 98% capture rate is better than 85%. If yours aren't that good, consider replacing them.

Going More Advanced (4)

Are you wanting to recycle your filtered air? **-BEWARE THE LOOP!**

If your filters only capture 85% of particles under 2-5 microns, that means it's passing 15% of the nastiest stuff back into your shop. As you continue work, looping this air back into your shop, or having a filter issue/failure can spell trouble! How will you promptly detect this?

Finally, Quality Assurance

So far, the best practical tool I've found to confirm shop air quality is to use a *Dylos brand DC1100 Pro* air particle counter. Ponder and decide for yourself.

Hmm, sounds like a tool some group members might cautiously share?

http://www.dylosproducts.com/ornodcproair.html?gclid=EA1aIQobChMI3IOW2rKM4gIVDPjBx0IUg34EAAYASAAEgK6mPD_BwE

Sorry for such a long message, I felt it was too important to condense any more than what I did. Thank you Ron for all your hard work on this topic and letting me use your slides.

Dale Bowlin President

Tuesday, May 21, 2019 at 6:30 pm in the basement of Rocklers

May 21, 2019 - Chuck Hix build for us, in real time a example of his work.



(our illustrious Treasurer) will Bow Saw. Wohoo! Here is an

Kez Colorado 2019

On Saturday May 25, 2019 at 913 E. 75th Avenue Unit A, Denver, CO 80229 there will be a Japanese woodworking festival. This is the woodworking shop of at The Cabinet Face. The Kezurokai is a traditional woodworking festival and competition held in Japan every year that is centered around a plane shaving competition.

The event will run from 10 – 5 and will be focused on Japanese woodworking, complete with 4 different lectures and demonstrations. There will be a BBQ lunch available for purchase, an all-ages hand plane competition will seek the thinnest shaving, and prizes will be awarded for the thinnest full shaving. There will be a Japanese tool vendor like last year as well as a special guest, Jay Van Arsdale from Kezuroukai USA, who is also one of the dominant forces behind Japanese style woodworking in America.

Tickets for the event can be purchased at the following link or at the door. This is a great event and I encourage those available to attend as the rarity of Japanese woodworking on the Front Range will guarantee this to be new and interesting.

<https://www.eventbrite.com/e/kez-colorado-2019-tickets-60422354890>

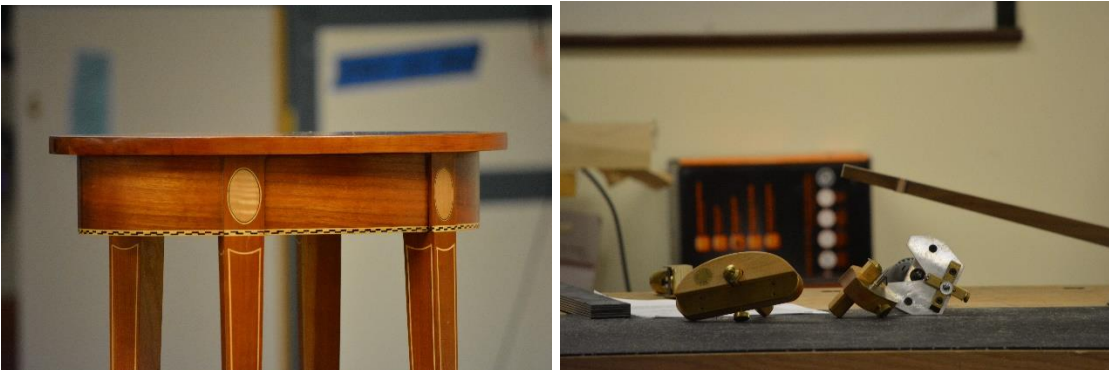
Kevin Loyd, Shows & Exhibits

Presentation



Rich Macrae on Federal Furniture Accents

If you've attended more than a handful of Guild meetings, you've surely seen one or more of Rich Macrae's meticulously crafted federal period pieces in the Show-and-Tell portions of the meetings. Whether an end table, a keepsake box, or a jewelry box, they're always in the style of the federal period, encompassing the time from about the end of the Revolutionary War to about 1820. Such pieces are generally characterized by adornments consisting of contrasting string inlays, banding, and paterae (circular or elliptical ornaments resembling dishes). To the most casual observer (e.g., me) how the craftsman achieves this has always seemed just short of black art. Having now seen Rich demonstrating how some of it is accomplished, it really is an art, but one that can be learned with much patience, fanatical attention to detail, good taste, and a good deal of studying the properties of the materials involved. But the reward for all of the foregoing can be pieces that are simply stunning.



Lest the reader think that such adornments are appropriate only to pieces representative of the federal period, the same techniques can be effectively applied to more modern pieces with dramatic results.

Rich began with a brief summary of federal period furniture characteristics, aided by a sample table leg he passed around to show simple stringing. Although he said such work is not difficult but is tedious, my experience with such clean-lined pieces has been that the simpler the lines of the pieces, the more precise everything about it must be. At his level, that may not be difficult, but for me...

Traditionally holly, which is very white, is the preferred wood for stringing because it contrasts so nicely with the usual mahogany or cherry. Ebony is traditionally used in composing the banding, but that's become difficult to source in recent years, so dyed costello (a South American wood, mostly from Paraguay) is now frequently used. Unfortunately, costello (also spelled with one 'l') doesn't glue as well as ebony and lacks the fine end grain of ebony. One curious fact is that costello is the finest grained wood in the world.



Preparing a table leg for a string inlay can be done with a scratch stock custom made to cut 1/16-inch deep by 1/32-inch wide. Rich also uses his Dremel tool fitted with a router base sold by StewMac (Stewart MacDonald) for use by luthiers and other musical instrument makers. He prefers a cordless Dremel because it lets him concentrate on the actual job rather than diverting his attention to cord management, although he favors use of a pedal for power control. He uses bits from StewMac too.

Lie Nielsen also make groove cutters, but only for straight lines. Rich suggested that another source of tools adaptable to cutting inlay grooves is model railroad shops, but gave no specific suggestions. He also demonstrated a couple of adjustable-radius cutters for making curved grooves.

Before the grooves can be considered ready for glue-up, Rich uses scrapers to make the grooves uniformly deep and square-cut.

Although you can buy 1/32-inch stringing and it works well, it's easy to make your own from veneer, as Rich demonstrated. He uses a specially-built sled at the edge of the bench with a block plane, but warned not to use too much pressure lest the veneer tear.

When it's time to glue the string into the groove, Rich applies the glue with a syringe, being certain to get glue on the sides of the groove. It's fine when the string is a bit proud of the surrounding surface because it's easy to scrape or plane flush. Paterae are fixed in place with hide glue, but ordinary Titebond works well for everything else.



Rich has a variety of cutters for milling curved grooves and bends the strings to fit the required profile with a bit of heat. He expends considerable effort in trimming the corner joints, especially where curved strings intersect straight ones, using chisels and plane irons and incredible patience to get perfect joints.

With time running short, Rich briefly commented on banding, which can be purchased in "logs." Like so much else about this craft, however, it lacks the "punch" of shop-made banding, which can take weeks to produce in usable quantities.

No report on this presentation would be complete without commending the videographer for the evening, Bill Knoll. Bill put a lot of extra effort into zooming into everything Rich was doing as much as possible, doing everything short of dismounting the video camera to show as much detail as he could. Thanks, Bill.



By Bob Kleinfeldt

About Wood



In this month, May 2019, we consider **Andaman Padauk** (**Pterocarpus dalbergioides**). The genus name is in honor of Nicholas and C. G. Dalberg, Swedish botanists about 1730 to 1820. , **Padauk** is also known as Andaman Redwood, vermillion wood, red narra, yellow narra, maidon, East Indian mahogany, and Indian redwood. **Andaman Padauk** is from the Leguminosae, the legume family; the pea or pulse group . **Andaman Padauk** is found in the Andaman Islands. The Andaman Islands are located in the Bay of

Bengal. They lie between India and Myanmar. Within the genus **Dalbergia**, there are several other closely related species found around the world, including African Padauk, and Burma Padauk.

Recall that in previous columns, we have defined the Modulus of Rupture (MOR), the Modulus of Elasticity (MOE), Crush Strength, and Janka Hardness. We will continue to use those terms. Most of the other terms are generally well understood and will not be defined further. If you have questions about other terms or questions about a specific wood, contact wood@coloradowoodworkersguild.org.

Andaman Padauk



Here is a summary of the characteristics of **Andaman Padauk**:

Distribution: From the Andaman Islands

Tree size: 80-120 ft (24-37 m) tall; 2-4 ft (.6-1.2 m) trunk diameter

Average Dried Weight: 48 lbs/ft³ (770 kg/m³)

Specific Gravity: (Basic, 12% MC): .63, .77

Modulus of Rupture (MOR): 14,770 lb_f/in² (101.9 MPa)

Modulus of Elasticity (MOE): 1,754,000 lb_f/in² (12.10 GPa)

Crush Strength: 8,830 lb_f/in² (60.9 MPa)

Janka Hardness: 1,630 lb_f (7,250 N)

Shrinkage: Radial, 3.3%; Tangential, 4.4%; Volumetric, 6.4%; T/R Ratio, 1.3

Appearance: heartwood is pale pinkish orange to a deep brownish red; will darken over time; sapwood is narrow and yellowish-gray.

Grain/Texture: grain is interlocked; texture is coarse

Stability: can be air dried or seasoned in a kiln; little tendency to warp or split

Relative strength: very strong; similar to teak

Decay Resistance: high natural resistance to decay and insect attack

Workability: overall easy to work; tear out may occur during planing; turns, glues, and finishes well

Odor: faint aromatic scent while being worked

Toxicity: reported to be an irritant and sensitizer

Potency: moderate

Toxicity Source: wood oils and wood dust

Reaction: skin irritation; may cause nausea, asthma and other respiratory symptoms

Sustainability: little data available; wood is seldom available

Uses: fine furniture, turnings; veneer, inlays, boat building, flooring

Typical Cost: prices are high; prices compare to other woods in the Dalbergia genus

Comments: historically, this species was one of the woods called "Vermillion;" today, most Padauk comes from Africa; the Andaman Padauk is the state tree of the Andaman & Nicobar Islands

Sources: Woodworkers Source; The Wood Database; American Hardwoods Information Center; Flynn, James H. and Charles D. Holder, Editors. ***A Guide to Useful Woods of the World, Second Edition***. Forest Products Society, Madison, Wisconsin, 2001.

If you have questions about a specific wood, don't hesitate to send a note to wood@coloradowoodworkersguild.org.

Lindy Baer

Sponsor's Corner

Frank Paxton Lumber Wood of the Month

The featured Wood of the Month for May 2019 from Frank Paxton Lumber is F1F 4Q S3S Walnut in random widths and 6' to 8' lengths.

Paxton also has a flash sale of 4Q S3S Superior Cottonwood in random widths and 6' lengths While supplies last.

As always, call 303-399-6047 for pricing.

Sponsor: Profile TC Woods

Mission Statement: TC Woods is dedicated to preserving as many trees as possible as wood products and to strengthen and increase our local, urban forest.

TC Woods (see www.TC Woods.com) is Colorado's premier Urban Sawmill. In 1995 Dan Odell, an arborist, was no longer content with dumping or chipping wood waste generated by home owners and arborists who remove trees. Valuable logs that could be cut into lumber and commercial wood products were included in this "urban waste". Using an attachment to his chainsaw to create a band saw, he began sawing logs into lumber. In 1996 he opened TC Woods in Ft. Lupton to receive logs and manufacture lumber from any species of wood that grows locally. This now includes over 20 species of hardwoods as well as native softwoods and poplars.

TC Woods is open five days a week. They offer custom milling and a variety of partially or fully finished furnishings. Their inventory includes both rough sawn and finished lumber, natural edges, ready-made tabletops, shelving, trim mantles, beams and boards from 6" to 4' wide and 2' to 14' long. Custom milling services can be as small a 6-8" and 3' long (greatest efficiency is for 1'-3' diameter and 4'-14' lengths. They have the capability to bandsaw mill up to 40" diameter x 20' length logs.

The TC Woods website includes information on a number of wood related topics, which may be of interest.

Company Location: 5406 CR 23, Ft Lupton, CO 80621

Telephone: 303 666-8989

Website: www.TC Woods.com

Guild Liaison for TC Woods is Bob Beason

liaison-tcwoods@coloradowoodworkersguild.org

Show & Tell April 2019

Our April meeting didn't conflict with the tax filing deadline, which must have given people the great idea to participate in the Show and Tell. For the benefit of the new members and visitors the Show & Tell is open to submissions from everyone so don't hesitate to bring in your work. By sharing what you've been working on it shows others what you are working on and it can inspire others. It also helps other see the great resource of knowledge the guild has within its membership.

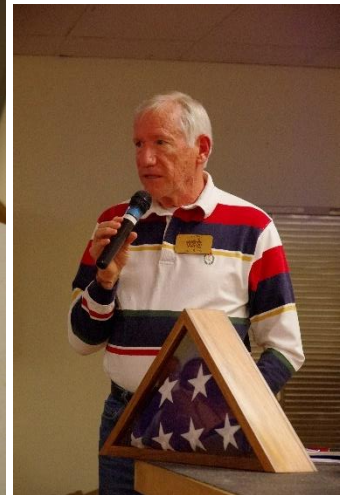
First off was Dave Baker with a collection of wooden prayer crosses that fit comfortably in one's hand. Dave found that the more natural simple woods with spalting or beetle kill pine garner the most interest.



Next up was Dale "the head honcho" Bowlin with some CNC-made Christmas gift toy cars. I just hope the recipient appreciates these are solid paduak that will take on a great patina over time with plenty of sticky-handed play time.



Jim Barry brought in a funeral flag display case that he made for the flag given



the widow of his mentor.

Doug Pinney brought in one of his ever more complicated carvings, and this one happened to be an



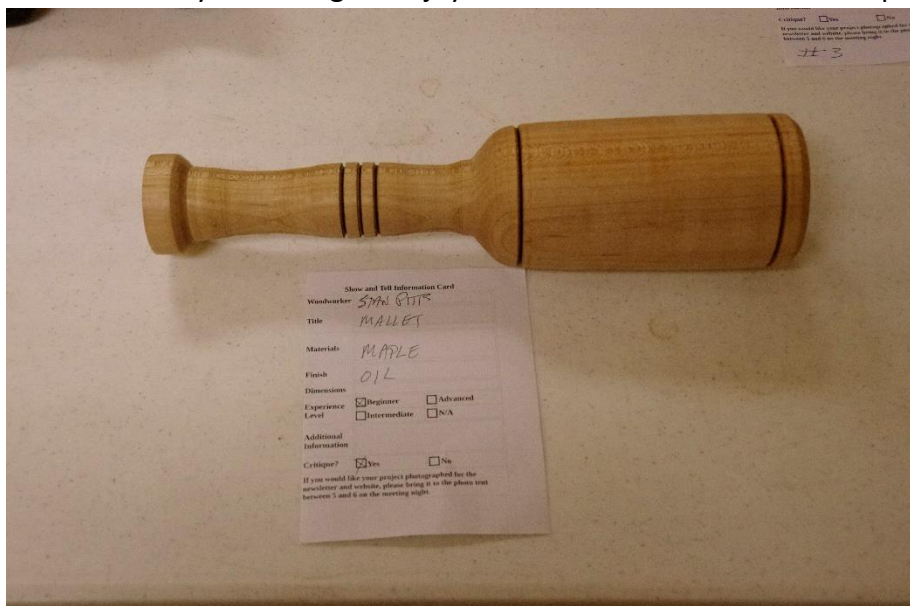
anniversary gift.

Dick Dailey brought in his patent-not-pending wooden marble maker. With the benefit of a clear top one has the ability to check the progress. The alternative is opening the lid and inspecting them quickly as they shoot



past you, your choice.

Stan Pitts brought a mallet he made, which turned out pretty good (I like puns). This was Stan's first attempt at woodturnery and being an enjoyable success declare his next step was to join the woodturners group.



The winner of the night was Devon Lindsley with a few different items. She brought two Krenov-style handplanes with bodies made of hard maple and soles of paduak and a joiner's mallet. Devon expressed one of the key benefits of making your own tools and that is

you can make it to fit your hands perfectly. Her interest was enhanced by a woodworking intensive at the College of the Redwoods before moving to Colorado. As a fellow plane maker welcome.



Thank you to everyone that brought in their work to share with the rest of the group. Remember that each month the show and tell is one of the staples of the meeting so please continue to bring your pieces and tell the rest of us what you've been doing.

Kevin Lloyd
Shows & Exhibits

Library News

Be sure to check the link on our website for our library catalog. The CWG library accepts donations of books and DVDs only. The library has several magazine archives available in DVD form but does not maintain any hard copy issues. Any member wishing to donate magazines is welcome to bring them and place them on a table for members to take home with them.

The donor is responsible for setting up and clearing up any unclaimed items afterwards.

<https://www.librarycat.org/lib/COWoodworkersGuild#>

Jim Barry, Librarian

Help Wanted

Vacant- Publicity and PR Chair

If we do not have a replacement Chair by June 1st this Chair and Duties will not be supported in the July newsletter. I hope another member will step forward to help out?

Vacant – Newsletter Publisher

Assistance – Community Services Chair

Needed- Webmaster - webmaster@coloradowoodworkersguild.org

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B & B Rare Woods 871 Brickyard Circle, Unit C4, Golden, CO 80403 Phone: 303-986-2585

Website: www.wood-veneers.com

Bridge City Tool Works

Harvey Industries International DBA Harvey Industries, 10830 Ada Ave, Montclair, CA. 91763

Phone: (800) 253-3332

Website: <https://www.bridgecitytools.com/default/>

Questions or comments to sales@bridgecitytools.com. Please allow up to 2-4 business days for email and phone call responses.

Two orders per year (to be determined) and must be shipped to one address. 10% discount, when ordered directly from Bridge City Tool Works. Discount does not apply when ordered through dealers

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Website: www.usedtoolsplus.com

Denver Woodworking Company 2062 S. Bannock Street, Denver, CO 80223 Phone: 303-733-3130 Website: www.denverwoodworking.com

Mile High Tree Care, Inc. 6010 W. 56th Avenue, Arvada, CO 80002 Phone: 303-292-9393

Website: www.milehightreecare.com

Frank Paxton Lumber Company 4837 Jackson Street, Denver, CO 80216 Phone: 303-399-6047

Website: www.paxtonwood.com/denver.aspx

Rockler Woodworking and Hardware 2553 S. Colorado Blvd, Denver, CO 80222 Phone: 303-782-0588

Website: www.rockler.com/retail/denver-colorado-hardware-store.cfm

Sears Trostel 1500 Riverside Ave, Ft Collins, CO 80527 Phone: 970-482-1928

Website: www.sears-trostel.com

Signature Medallions 4218 Ponce De Leon Drive, La Mesa, CA 91941 Phone: 619-303-2876

Website: www.signaturemedallions.com

TC Woods 5406 County Road 23 Ft. Lupton, CO 80621 Phone: 3-666-8989

Website: www.tcwoods.com

Tool Zone, Inc. 8651 Grant Street, Unit 1A Thornton, CO 80229 Phone: 303-252-8500

Website: www.toolzone.com

Woodcraft of Denver 6770 S. Peoria Street Centennial, CO 80112 Phone: 303-290-0007

Website: <http://www.woodcraft.com/stores/store.aspx?id=305>

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secretary@coloradowoodworkersguild.org



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treasurer@coloradowoodworkersguild.org



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info@coloradowoodworkersguild.org



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wood@coloradowoodworkersguild.org



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Class Schedule at our sponsor's facilities

For More Information Ask an Associate

Or

<https://www.rockler.com/retail/stores/co/denver-store>

Woodcraft

~ May 2019 ~						
◀ Apr 2019						Jun 2019 ▶
Sun	Mon	Tue	Wed	Thu	Fri	Sat
			1	2 Relief Carving (1 of 4) 6-9p Charlie Milliser (\$130)	3	4 Turn a Bowl 9:30a-4:30p Doug G. (\$110)
5 Knife Making 10a-4p Brendan (\$115)	6	7 Woodworking 101 (1 of 4) 6-9:30p Shawn (\$195)	8 Woodworking 101 (2 of 4) 6-9:30p	9 Relief Carving (2 of 4) 6-9p	10	11 Bandsaw 101 10a-4p Jim (\$95)
12 Mother's Day Natural Edge Bowl Turning 9:30a-4:30p Doug M. (\$115)	13	14 Woodworking 101 (3 of 4) 6-9:30p	15 Woodworking 101 (4 of 4) 6-9:30p	16 Relief Carving (3 of 4) 6-9p	17 Build A River Table (1 of 3) 6-9p Brendan (\$1,800)	18 Armed Forces Day Build A River Table (2 of 3) 9a-5p
19 Build A River Table (3 of 3) 9a-5p	20	21	22	23 Relief Carving (4 of 4) 6-9p	24	25 Intro to Turning 9a-5p Doug G. (\$105)
26 Scroll Saw 101 9a-1p Jim (\$75) ----- Intro to Finishing Shawn 2-6p (\$95)	27 Memorial Day STORE CLOSED	28	29	30	31	Notes:

<https://www.woodcraft.com/stores/denver>