



KILLING SPOONS

an
illustrated
guide

Ty Thornock

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INTRODUCTION

I'm not sure if it takes a certain hubris or humility to write a book about how to do something. I do know that it makes me extremely nervous to stand on the shoulders of the many great kolrosers, whose names I will never know, that have left their fabulous work for us all to learn from. This book got its start from the many questions I'm asked about how I kolrose spoons. Often they were the same questions and sometimes the answers were more complex than a simple Facebook dialogue could answer. There are few resources available to the aspiring kolroser, which results in learning through trial and error.

Perhaps the limited resources are in part due to the lack of understanding. Kolrosing in essence is simple. Make a cut with a knife and backfill the cut with powder. Simple. This is similar to saying that all a drummer does is beat a drum with a stick. In essence it is true, but there is quite a bit more that goes into it to get good results.

There are a few of us that regularly kolrose spoons. Three of whose work I admire greatly are Don Nalezty, Dan Musick, and Liesl Chatman. I am sure there are many other great kolrosers from the Scandinavian countries that I have yet to be acquainted with, too. This brings me back to the hubris. I am in the middle of my kolrosing journey. I have a long list of things left to explore. Techniques, tools, powdered materials – all that I want try. For this reason this book should not be viewed as a comprehensive guide.

In addition to techniques, I will explain some of my personal theories as to how and why certain things work and other things do not. I may be wrong, and I may be right, but the general principles have helped me focus on what is important in kolrosing.

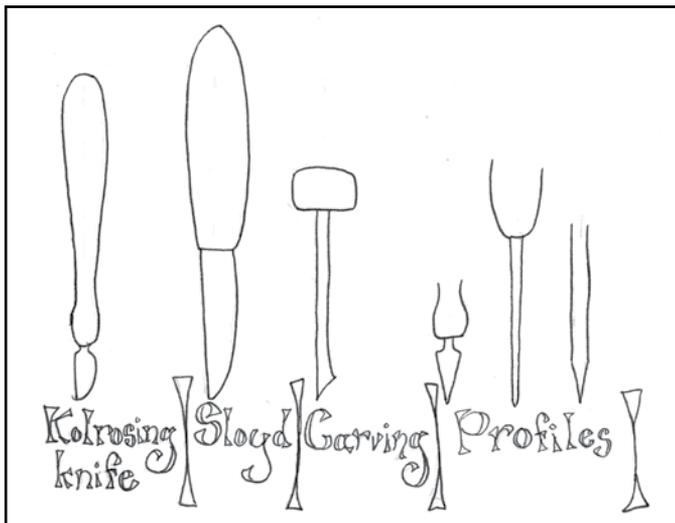
Lastly, I will discuss some design principles and templates for spoons and for kolrosing. For me the beauty of the object is always trumped by the function. While not a spoon carving book, I want to include enough information that the beginner can at least practice on spoon shaped objects.

Before you begin, I want to share a brief story. Once, my uncle (a pro golfer) was teaching me how to swing a golf club. Do this with your arms, that with your hips, your head, eyes, neck... Every part of my body had to do something very specific. Last he said, 'Now forget everything I told you. Relax, and hit the ball.' My advice to you is the same. Start kolrosing. Use the tools and the materials you have. Read this, but relax and have fun. You will build the skill you need more quickly than you realize.

TOOLS

The tools for kolrosing are simple. Basically all you need is a knife blade. Whether this is the tip of a utility knife, your sloyd* knife, a carving tool or a dedicated kolrosing knife they all perform the same function. They create an incision.

The goal of this section is not to tell you to use one tool or another, but rather to teach you how to select a tool that fits your needs. If you look at the cross section of a knife, you will see that a sloyd, or carving knife maintains a very slim profile. This is great for cutting, and for kolrosing can let you make very thin, fine line cuts. Carving tools can have wider cross sections and kolrosing knives wider still. The advantage of a kolrosing knife with a wide profile is that it will spread the wood apart further, letting you fill more. In addition, if you want a line twice as wide as you would normally have, you can push your knife in marginally deeper in order to spread the wood. With a sloyd or utility knife there is no way to increase



* Sloyd is the Swedish word for 'craft'. A sloyd knife is meant for carving and has a shallow, Scandinavian (flat) grind to the blade.

the width of your cut. I will confess, though, that making wide cuts is difficult because of the pressure required. I get wider lines other ways that I will discuss later.

The other advantage of a kolrosing knife is that often the handle is very thin and round. This thinness and roundness allows for precise turning of the knife. Making small turns with a large handled sloyd knife is possible, but more difficult. My favorite kolrosing knives are ground from drill rod. The rounded back of drill rod makes it very comfortable to push against compared to other knives.

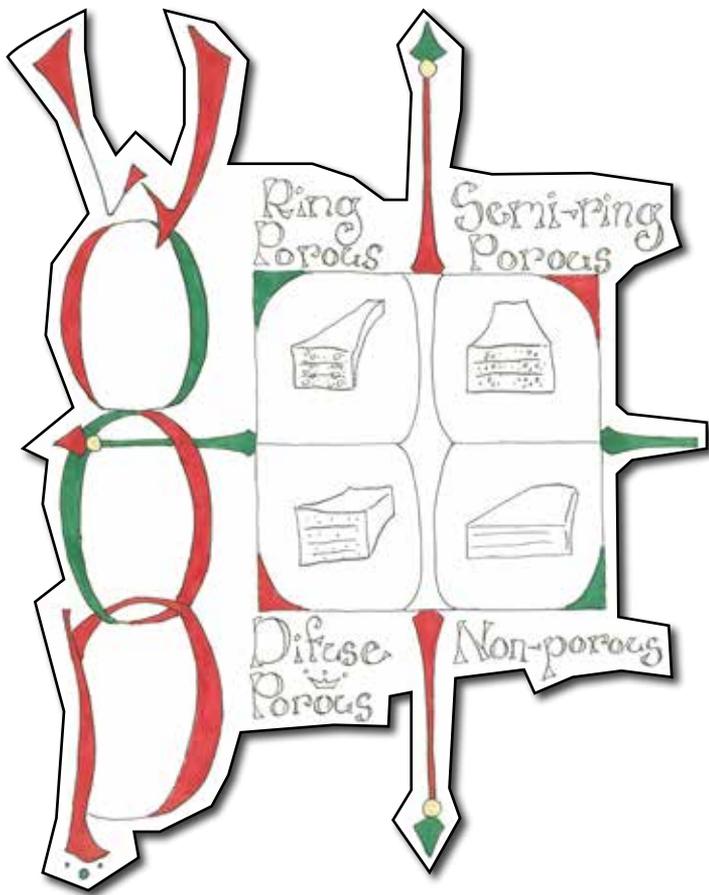
Some steels are harder or softer than others. My main kolrosing knife is made from high speed steel. My sloyd knife is a laminated blade from Mora. It's their 106 model. I have also done some kolrosing with a high carbon detail carving blade from a smith in Sweden by the name of Magnus Sundelin. I have not noticed a difference except that you have to stop and strop some blades more often than others. Pick something and stick with it for a while. It usually takes me 2 to 3 months (or 40 or 50 spoons) to become comfortable with what a new tool can and cannot do.

In addition to a knife, you will need a strop and some honing compound. It is important that you keep the edge of your knife razor sharp. If it is not, you will fight cutting across the grain and changing grain direction. What should be a pleasure can quickly become frustrating with a dull tool. Learn to strop and keep it sharp. There are plenty of resources available on sharpening, so I feel no need to cover them here.

I have some ideas I want to try that I am beginning to experiment with in regards to tools. I would like to try a kolrosing knife with a wide secondary bevel. The theory being that the wide bevel opens up the cut and pushes the wood away. The rest of the blade then has reduced contact with the wood, which reduces the friction and makes cutting easier.

Another idea has to do with the amount of curve at the tip and how extremely tight curves may be taken. Still another is with the angle at which the blade attaches to the handle to facilitate joining cuts.

In addition to a knife, there are other tools that are helpful for layout. A compass, straight edge, and various templates are nice for giving clean lines to follow when kolrosing.



Wood can be largely grouped into four types: ring porous, semi-ring porous, diffuse porous and non-porous. Basically, from a carver's perspective, the ring porous woods will have larger holes, the semi-ring porous will have small holes, the diffuse porous woods will have tiny holes and the non-porous woods will not have holes. Non-porous woods are softwoods like pine and cedar. Those woods also tend to have aromatic resins, so I don't carve spoons with them. My focus is on hard woods, so that is what I discuss here.

Some people will say diffuse porous woods, like maple, cherry, apple, etc... are the best woods to kolrose. This is because the tight pore structure results in less random staining of the spoon. I prefer to shy away from 'best' and 'worst' in carving and focus more on effect. If you use semi-ring porous woods (like black walnut) you will see slightly more staining. Ring porous woods, like oak and ash will catch powder in the

pores. This results in staining across the spoon. It can be a fascinating effect, and I have kolrosed several ash spoons that have turned out nicely. It does make detailed kolrosing more difficult and understanding how your powder will stain the wood is imperative for good design with ring porous woods.

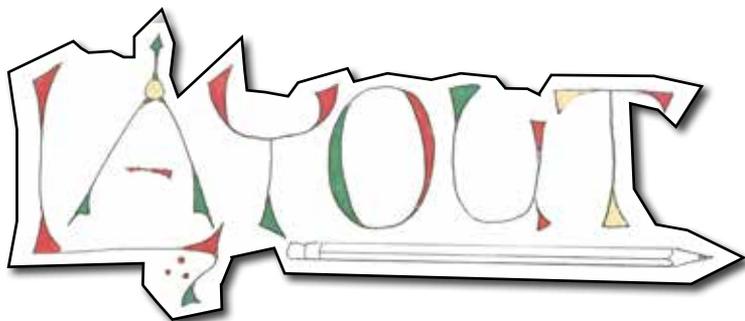
Among the diffuse porous woods you have a wide range of color variation and hardness. Some woods, like willow, are extremely soft. With woods that soft your knife can penetrate deeply, allowing a variety of line thicknesses. Other woods, like plum, are harder and can be more challenging to kolrose. When plum (or apple or any number of fruit and nut woods) become dry, they are very difficult to kolrose because of their hardness. These woods you want to kolrose somewhere between freshly green and dry.

Softer woods, like willow are so filled with water and so springy when wet that if you try opening a knife cut in green wood it often closes behind the blade. Willow, birch, boxelder, cherry and soft maple all kolrose best after they have dried (Note, I said 'best'. If you want a very thin line that penetrates deeply you can cut and fill it green, then go back and kolrose the rest when dry. A cuts that closes behind the knife is an effect you may be able to use to your advantage). Take the time to try woods at different stages to see when they kolrose best. I recently tried kolrosing fully dry American elm. Never again will I do that. The wood was far tougher than I preferred.

Bass/linden/lime wood is a very traditional wood to kolrose because it is soft, diffuse porous, and white. White woods tend to provide the greatest contrast for the kolrosing, but I have successfully kolrosed many different types of woods of many different colors. Kolrosing can accent them to beautiful effect.

My current favorite woods to kolrose for spoons are cherry and boxelder. They make sturdy spoons, take knife cuts well, and show kolrosing to good effect. Soft maple and birch also are very nice to carve.

The best advice I can give in regards to selecting wood to kolrose is to use whatever you have available to you. Among your variety of native woods you are likely to find some that kolrose well.



For me, layout is one of the most important parts of kolrosing. Some people are able to kolrose on the fly, making it up as they go. I need to have a plan. I will often sketch on paper first, and sketch on the spoon afterward.

Before kolrosing, carve (or sand) your surface as smooth as possible. Removing irregularities in the wood will make it easier to transfer your design and subsequently to carve.

After carving you can burnish the spoon (see the section on burnishing). Burnishing will crush the fibers on the surface, smoothing out some irregularities and closing pores so they do not discolor as much as they would if left unburnished.

Time to transfer your design. Sharpen your pencil as finely as possible. Remember that your knife can cut far more finely than your pencil can draw. When you have a line 3 times the width of your cut, you have to begin making decisions about which side of the line to cut on. That is straightforward if you are doing a single straight cut. But around curves and when in conjunction with other lines it can mean altering a design.

Keep a thin line so you don't have to make that decision.

Erasing. I draw directly on the spoon. There are other methods, but I prefer drawing directly. By drawing directly on the spoon, I can adjust the design to match the wood's features. It also means I make mistakes that must be erased. Do yourself a favor and get a kneaded rubber eraser. The pink erasers leave behind bits that can get lodged in the wood.

One alternative to drawing directly on the spoon that I learned from Don Nalezty is to draw on paper; cut the design out and stick it to the spoon with a little glue from a glue stick. The

glue will wash right off later. This method can become a little problematic on the bowl of a spoon where you try to make a flat surface conform to a curved one. By doing so, you get all of your erasing done before the design gets to the spoon. Throughout the book, feel free to transfer any designs and patterns to your spoons.

The designs I draw tend to either be geometric or organic in nature. For organic designs, like acanthus leaves, the first step is to draw out major curves. By drawing simple major curves first I can ensure that the design will have an overall flow to it. I can make sure that the eye is drawn first to one part, around the spoon and back. After the major curves are drawn, I will draw secondary curves. Finally I will draw the whole design. The design may or may not follow those curves exactly.

Geometric designs

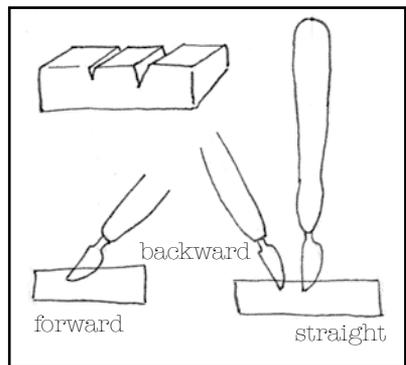
Some people have an eye for straight, even lines. Not me. I struggle to make things even and symmetrical. Most geometric designs require precision that I am unable to accomplish by eye. Fortunately, most of them can be broken down into grid patterns. I use a compass, circle and triangle templates and eraser shields to ensure that I have straight and even lines. In addition to these tools, Don Nalezty has created specialty stencils for spoon carvers that make layout extremely easy. If you are interested in his credit card size tools he can be contacted through Facebook on his page Don Nalezty Crafts. See the section titled 'Decoding Patterns' for instructions on how to break a complex pattern into simple shapes. In there I will give instructions on how to create some of the more common patterns.



Okay, so let's get right to the heart of kolrosing: making cuts in the wood. There are several factors that will affect the quality of your cut. First, you need to make sure that you have a very sharp knife. If it is dull it will be difficult to push through the wood fibers, the wood will tear and when you do succeed in cutting it you will end up putting so much pressure on the knife that your cuts slip. It is a messy thing to do and an easy fix: keep your tools sharp.

The second factor is the the bevel angles on your knife. A typical sloyd knife has a total bevel angle of about 22 to 25 degrees. This makes for smooth cutting of the wood. When kolrosing, though it means that it will not open your lines very wide. If you want thin lines, you can get them with a sloyd knife. My main kolrosing knife has a bevel somewhere in the 40 degree range (this is a guess based on eyeballing the knife). This means that I can open a fairly wide line without pushing the knife deeply into the wood.

Third, the angle of the knife as the blade pierces the wood also plays into cut quality. In order to discuss why the angle is important I want to introduce the concept of drag. Drag is the word that I use to describe the forces that resist cutting through the wood. Drag includes the friction of the wood rubbing against the sides of the knife



and the pressure of the wood pushing back against the blade as your hand pushes down. When the knife blade is raised at a 90 degree angle to the wood drag is decreased because there is less blade that comes in contact with the wood. You reduce

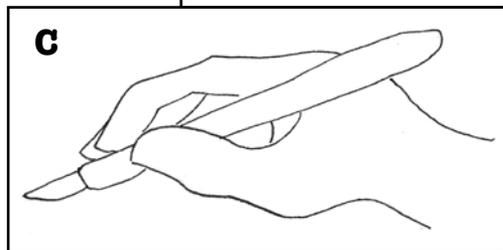
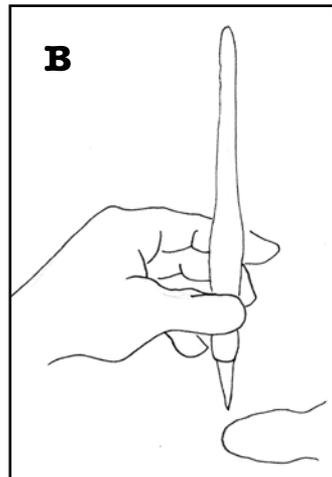
friction, thus making it easier to push through the wood. If you lean your blade forward into the wood you increase drag as the leading edge also engages. Leaning the knife backward, in my experience, does not significantly increase the amount of blade making contact.

Drag also plays into factor number 2. The wider the bevel angle on your knife, the more the wood pushes back against it, increasing drag. Normally this is not very significant unless you are trying to make deeper cuts.

The fourth factor in cut quality is surface preparation. Surface preparation can include ensuring your surface is even (either sanded or knife finish), oiling, waxing, and burnishing. These factors will be discussed later in the book. Suffice it for now that a lubricated surface decreases drag on the knife and an even surface makes it easier to control the depth of cut.

So there you have it: sharpness, degree of bevel, knife angle and surface preparation. That should be enough to introduce you to some basic cuts. Let's talk about how you should hold your knife.

I use two basic grips for most kolrosing. The first (B) is the grip that I use for 80 to 90 percent of my work. In this grip you will hold the knife upright at 90 degrees to the wood with the blade facing out away from you. Your off hand will hold the spoon with the fingers wrapping underneath and the thumb on top of the spoon. The thumb of your off hand will push against the back of the blade, pushing it forward. The second (C) will be very familiar. Just hold the knife like



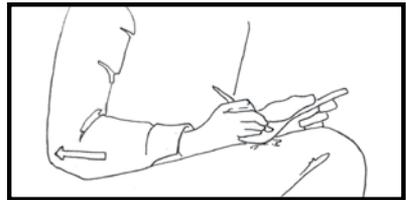
you are going to write with it like a pencil. The blade should face downward toward the wood. I use this grip less than the second, but it is handy for long straight cuts and long curves.

The reason I prefer it for long cuts is because I can take advantage of the drag induced on the blade. You see, when



the knife is held vertically there is little wood pushing on the sides of the blade, which makes it more prone to wobble. By laying the blade down flatter into the cut you have consistent pressure on the sides. That pressure causes it to resist turning. That resistance to turning also makes it resistant to wobble, thus straighter cuts. The downside to this cutting technique is that it tends to be less controlled along the length of the cut. If your surface suddenly changes direction your blade may slip out of the wood and cut off your line. You can mitigate this somewhat by using your large joints -elbow and shoulder- to make the cut.

Keeping your elbow tight against your side as you drag the knife back and anchoring your spoon holding hand on your leg can help steady things so you are less likely to slip (D).



When I was young and in college I was helping my brother move a hide-a-bed couch up into his new apartment. This was a nice long couch (read: heavy) and his apartment was upstairs and took a very tight turn into his apartment. We wrestled with that couch in those stairs for about 15 or 20 minutes. There was one time we thought if we lifted it

higher we could get it around the turn. It got so tightly wedged into the walls and ceiling that all of us lifting the couch let go and stood back to see it wedged 7 feet off the floor.

At this point you may wonder what this has to do with kolrosing. Simply this: like the couch, your knife blade is flat. The more blade you engage in the wood the harder it becomes to make small turns. When you make a small turn you want to engage just enough of your blade to make the cut, but not so much that it resists. That said, all knives will have their limits. You can only go so small before you distort the wood as you try to make a tiny turn. However, some things help. That is where the first knife grip really comes into its own. By holding it upright with the blade facing out you engage very little blade in the wood. Actually holding the knife straight up makes it difficult to see the edge of the blade engage the wood. Tilt it slightly to the side to see around the blade. You need to remember which way the tilt is facing though because if you turn the spoon around and make a close cut you may accidentally make a V cut.

There are 4 things that help in making very tiny circles. In illustration A the top hand twists the knife. It is very important that while you do this the thumb of your bottom hand is continuously pushing the knife blade forward. If you stop the forward movement you will break fibers in the spoon and leave an ugly dot where you thought you were making a curve.

Illustration B shows rotating the elbow away from the body. If you rotate with the elbow rather than at the wrist you will have a slower, more controlled turn. This works both for the hand holding the knife, and for rotating the spoon under the knife.

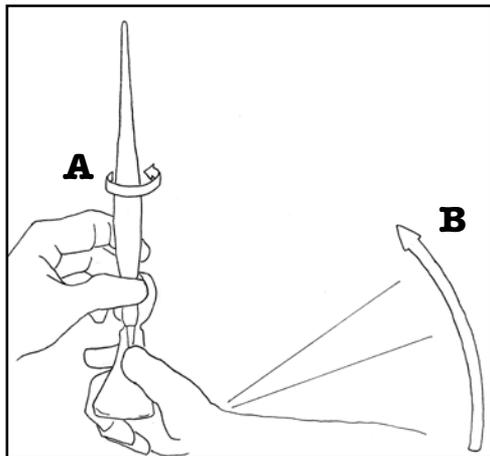
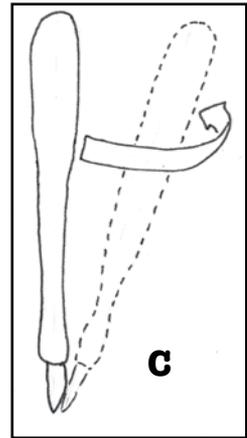
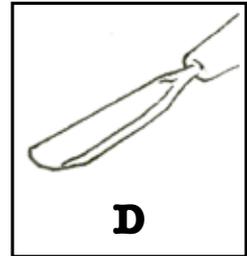


Illustration C is a bit tricky to explain. This is only for the tiniest of circles. Say under 1/8 of an inch. If you were to hold your knife with the point resting on the wood you could press the tip straight down into the wood and make a slightly longer cut. With a tiny circle you can push the blade deeper and simultaneously turn the blade. You have to be careful. If you try to turn too far you wreck the



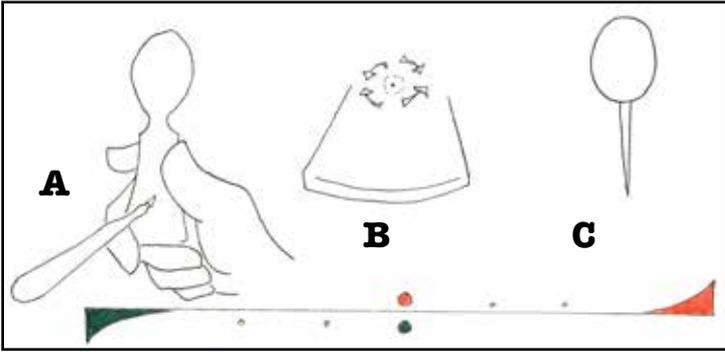
fibers as the back of the blade pushes the cut out of shape. Once you reach the limits of the turn you can take the blade out of the cut, move it to the front of the cut and repeat. It may take 7 or 8 repetitions to make a full, tiny circle.

The last way to get a tiny circle (D) is a way that I have seen on some antique spoons. Get a tiny gouge, press straight down and move it around until you have a full circle. If you engage the gouge in half of the previous cut and make 'half' a new cut it will keep your gouge in track to make a full circle.



Tiny Circles

Sometimes you want to take out a tiny circle of wood. Often you can do this with an awl by twisting it down into the wood, but the problem with an awl (C), especially if you want a little bigger circle, is you can easily get too deep. In that case you need to cut out a tiny circle shaped cone. You do this in 4 cuts. Start at the bottom of the circle and poke the knife at an angle

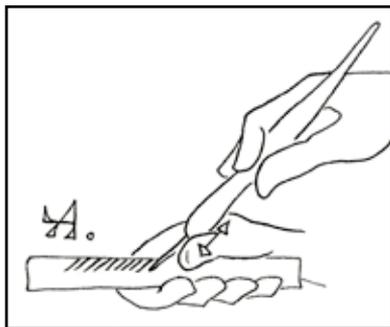


so that the tip is in the wood under the center of the circle. Pivot the knife without moving the point in an arc until you come up the side of the circle to straight grain. Do the other side, the flip the spoon around and do the last 2 sides. If you

Shading

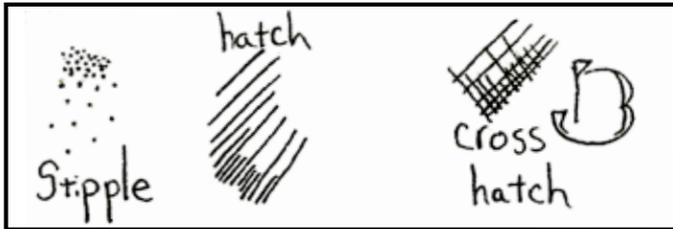
have done it well you have a perfect, tiny cone.

Shading is an elusive thing. I feel like I am still learning how to do this. Part of the problem is that the coloring does not actually change in tint. You create the illusion of shade by spacing cuts on the wood. The closer the cuts, the darker the



wood appears. On some pieces of colored wood you can also plan your design so that naturally shaded parts of the wood are areas that you want to shade anyway, increasing the tint.

There are various ways to shade when kolrosing. Here I



outline 3 of those ways. I am borrowing drawing terms for these because they mimic the drawing techniques with the same name. Each has advantages and drawbacks.

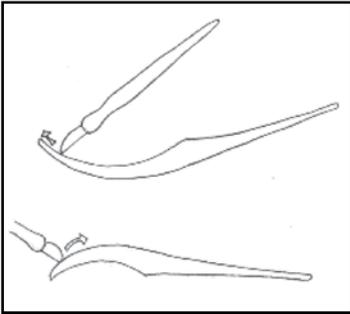
The first is hatching. Basically this is many parallel cuts close together. The closer they are, the darker your lines will appear. I like to hold my knife at about a 45 degree angle and incise. Use an even pressure thumb push to guide it across the spoon. Holding it at an angle means that as I rub the coloring in I can rub one direction and drive more powder in. I can also rest it back against my holding thumb to guide it back evenly, if I am making short stabbing cuts. If you need to turn the piece around remember which way your knife entered the wood so that as you continue your cut you do not take out a 'v' shaped piece of wood.

Cross hatching just means that you to lines that overlap each other like a checker board. You have to be very careful with this technique, especially if your lines are closely spaced, to be sure that you do not take little square shaped chips out. One way to help with this is by cutting one direction, then burnishing before cutting from the opposite direction.

The third way of shading is stippling. This is just short stabbing cuts into the wood. Space them closely or space them far apart. With all three techniques you will find that cutting across the grain will often open up a wider cut than cutting with the grain. Especially if your wood is somewhat green.

Concave & Convex

Varying these techniques can give you textures such as fur and hair:

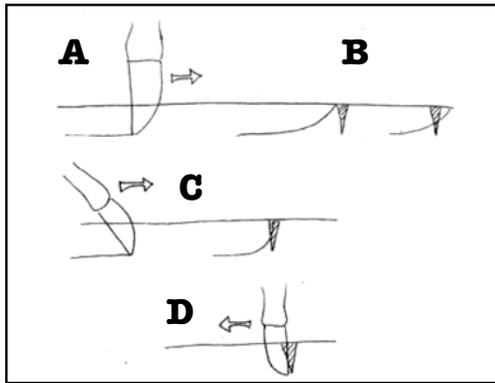


Kolrosing convex or concave surfaces is a little different than flat surface kolrosing. With both you should be constantly paying attention to how the knife engages the wood. The knife should always push uphill. If you push it downhill you will push the knife out of the cut and possibly scar your surface.

One of the other issues associated with spoon bowls is that as you try and kolrose the rim your knife is laying down in relation to the rest of the spoon. This means that the handle of the spoon can interfere with the handle of the knife.

Joining Cuts

One of the major frustrations that beginning kolrosers have is being able to join cuts cleanly. Often, if one cut abuts another you will see one cut running over the other. To understand why this happens you need to know how a kolrosing knife cuts the wood. Because the leading edge of the knife blade is at an angle, the top of the cut is much shallower and narrower than the bottom of the cut if the knife is held at a 90 degree angle to the wood. This means that if you push the blade up to the other



cut you may get a faint mark or no mark at all or in an attempt to join the cuts you may over run the cut as in illustrations A and B. To remedy this you can tilt the knife back as you approach the adjoining line. This evens up the depth so that the front of the cut is deep (illustration C).

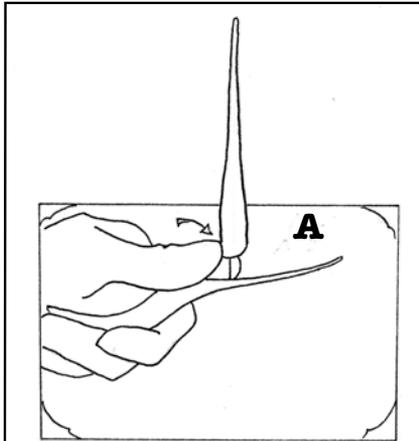
To tilt it back brace your pushing thumb against the spoon and use it as a fulcrum to lever the knife forward. As it levers forward the position will naturally bring the blade in line.

The other thing you can do is stop just short of your line, turn your work and your knife around and approach it from the other side (Illustration D). The problem with this is that it can be hard to see your line in order to get your knife exactly back into the cut. You can remedy this by rubbing a little of your coloring powder in the cut to see the knife better. You should only do this if your coloring powder is plant based. Mineral based powders can wreck your knife edge if you cut through them.

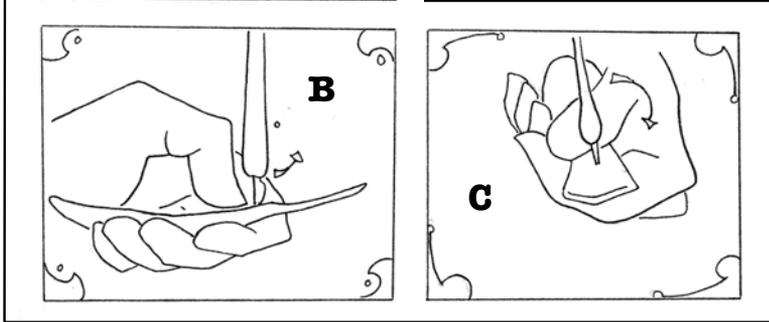
The other thing you can do is tilt your knife to the side and drag it across the wood . Don't push the point in and just hold the knife loosely. When the blade hits the cut you will feel it click into the crack. Stop, and tilt your blade up. The blade



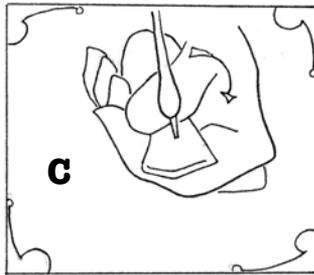
should be exactly in the crack so that you can finish the cut. This is my preferred method.



Picture A is the way that I thumb push about 90% of the time. The arrow shows the movement of the pushing thumb. Notice that it starts high and finishes low. By putting a little downward pressure on the blade with this push you also keep the blade engaged in the wood better.



Picture B shows putting some upward push to the blade. If you look at the spoon handle in the picture you can see that the wood drops down. If this push is continues it will push the blade out of the wood, possibly resulting in errant cuts. This cut is best used when kolrosing concave surfaces. If you are incising uphill the blade can sometimes have a tendency to want to go too deep. By switching to this type of thumb push it can lift the blade back out of the spoon a bit and let you cut more easily.



Picture C shows a push off the top of the thumb. This type of push is one I use for and this allows it to rotation cuts. The thumb moves in an arc stay behind the blade as the blade turns.

Play with different motions and positions of your pushing thumb. You may find a different position that suits you better.

KOLROSHING

COLORING



Coloring is the act of filling the cuts with a mix of powder and oil. Before I get into the actual process, let's talk about powders. One of the most traditional powders to use is ground pine bark. While this is still a viable option, nowadays we have other, more convenient options such as ground coffee and cinnamon. While charcoal (the 'kol' in kolroshing) may be used, it is often too fine and will stain the spoon. Ground spices seem to be the ideal size particle. I have used commercial pigments that are ground so finely that they seep into the cut

end grain when rubbed in. This causes a blurred effect to the lines. Some artist pigments will also stain the wood, leaving a deeper stain in your cuts. This may be an effect you like. It is worth experimenting with if you like color. Many people have tried to kolrose using organic powders other than browns and blacks. This is difficult because ground organic matter like sage and other light herbs tend to fade to brown over time, in essence giving you the same color you would get using ground coffee or cinnamon. The other option is to use inorganic materials such as plastics or minerals.



I have experimented with some ground mineral with limited success. It seems that .1 to .2 mm in size is small enough to fit in the cracks and large enough to keep the particles from seeping into endgrain. Although I've not yet not tested this fully, I believe ground mineral will not fade over time. The main issue with ground mineral is that you need to do all your cuts at once. If you rub in ground mineral then try to continue making knife cuts you will be literally running your blade through rocks. There is no better way to ruin an edge.

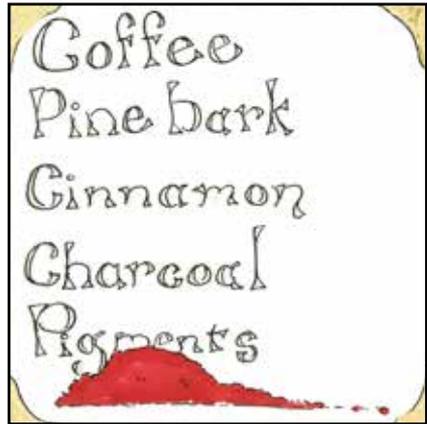
Harley Refsal said that he has ground plastics finely enough to kolrose, but something about plastic and greenwood crafts strikes me (and him) as odd. You can consider it an option, though.

There are a few ways to apply the coloring and oil. The most common is to cut, fill with powder, then rub oil over it. Honestly, oiling then rubbing powder works just as well, as does making a mix of powder and oil and rubbing the paste in. The main thing is to get them both in the cuts. If you apply the powder first expect to be unimpressed until you rub in the oil. The oil will deepen and darken the color. If you find the order you have applied the oil and powder yields a runny mix,

you can directly add more powder. If it is too dry, add a bit more oil directly to the spoon.

If you have made cuts at an angle, be sure you rub the powder in so that it forces it down into the cut and not so that it pushes it out of the cut.

Next is oiling! Almost there!



Oiling a spoon for kolrosing can have three purposes. First it can be used to lubricate the blade. Second it enriches the color of the kolrosing, and third it seals the spoon.

To be used as lubrication you will oil the spoon after drawing on it and before cutting. The theory is that the oil eases the drag caused by friction. I, personally, have not found it to be helpful. The one thing that pre-oiling can be helpful for is that you can erase your design just by rubbing it. Of course, this can also be unhelpful as it is easy to accidentally rub your design off of the spoon entirely. In lieu of oil, some people will use beeswax. It is more difficult to accidentally rub off the kolrosing after you have waxed it, but you also cannot oil the spoon after having waxed it.

You will find that after you have rubbed your powder in, the color is weak and difficult to see. Don't worry. This is normal. Just rub the oil over it and like magic the color darkens and becomes easier to see. I had worried that over time the kolrosing would fade but after having used kolrosed spoons for some time I can say that the color stays rich.

Generally when oiling a spoon you need a drying oil. The most common are flaxseed (linseed), walnut and tung oil. You should use only pure, cold-pressed flaxseed or tung oil. You can get walnut oil and flaxseed oil at a grocery store or health food store. Do not use boiled linseed oil because of the chemical driers that are used in it. I like to use Tried and True Danish oil.

There are other oils, but I am happy with what I use.



Burnishing is the compression of wood fibers. By compressing the wood fibers you can get a smoother, harder finish on your spoon. With kolrosing there are 2 times you can burnish: just after carving the spoon, and after you have kolrosed and oiled your spoon. The first is optional and the second is not.

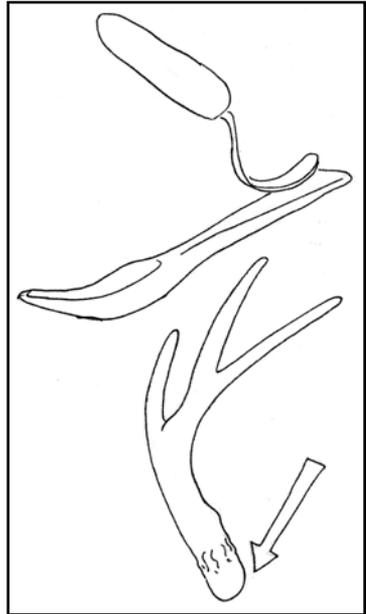
The reason you would burnish before kolrosing is so that you can crush the fibers and make it more difficult for stray coloring to enter the pores. Another reason for burnishing at this stage is it can smooth some minor unevenness in the spoon, which will make cutting your lines more predictable.

Burnish after kolrosing is essential because when you make the cuts in the spoon you push the fibers up and away from the surface of the wood. This gives it a rough feeling when held or put in the mouth.

For burnishing all parts of the spoon you just need something that is very smooth and harder than the wood of the spoon.

This may be a smooth piece of hardwood or antler. I like using the back of my spoon knife. The steel is polished and smooth. I also like that it has a gentle curve. Using a curved burnisher lets you focus the pressure in specific areas. A flat burnisher does not work as well because it distributes the pressure across a wider surface area.

You will find that burnishing after cutting and oiling will push some of the oil and coloring back out of the cuts. Go ahead and wipe this off. If you need the coloring, often you can be successful rubbing it back in over the burnished surface. Be sure that you brace your spoon from beneath (I often use my knee but you can also use a table or even your hand), and especially the bowl as you burnish it. Bracing lets you increase the pressure and supports it to keep thin bowls from cracking.



The bowl of the spoon needs to be extremely well burnished because it will be put into the mouth. Any irregular sharp spots can be felt with the mouth that might not even be visible.

You may find that after a week the fibers decompress. Go ahead and burnish again if this happens. Using a hardening oil can help mitigate this decompression.

Burnishing is the last step. Once you have done this, you are done! Enjoy your kolrosed spoon!

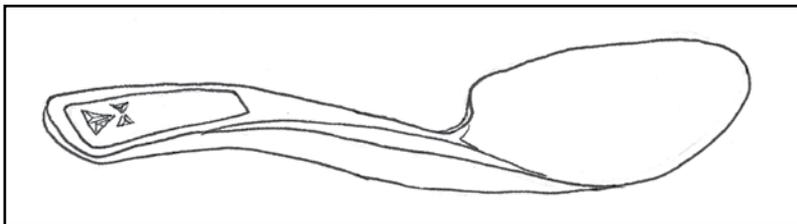
First, this is not about chip carving. There are other books and people more expert than I on the subject. I will say that contrary to what most of those sources will say, you can use a plain sloyd knife to carve chips, but it takes some patience and practice.

Filling Chips

When I was first learning how to kolrose, I remember seeing a spoon by Paul Adamson Addo that had large dark areas that were obviously filled with pigment. I was astounded. I had no idea how to go about making large dark areas. It was obvious that he chip carved the spoon, but I didn't know how to fill them. Then, one insomniatic night I realized that all I had to do was mix the powder with the oil into a paste, like paint, and smear it in. I tried it soon after that and found it worked. Just a little oil and lots of powder and you can make a paste. Be sure that you use a hardening oil, like flaxseed oil or pure tung oil so that the mixture will harden. I like to use Tried and True Danish oil because it dries in a week or two rather than a month or two.

This works particularly well with small chips. It can be more difficult with larger chips because the mix will want to rub out more easily. It also works to create wider lines. Along the outside of the line you want to make wider, make a long cut that undercuts the line. Along the inside of the line do the same. The distance you stay from the line will determine it's width.

In the next sections you will find information that is not specific to kolrosing but rather a collection of thoughts that I have related to spoon carving that you may find helpful in your greenwood journey.



DECODING PATTERNS

Everywhere I go there are beautiful patterns: tile work, fabrics, patterns in the rings of wood, feathers of a bird and in macrophotography of pollen and bacteria. These patterns, all patterns, fascinate me. Often I stop and look at them and try to figure out how I could draw them. Once, when taking a class on the humanities of Islam, I would spend hours pouring over the complex tile and brickwork patterns trying to decode how they were made. Some I could figure out and some I have yet to decipher.

The purpose to this section is to teach you how to begin to see and decode these patterns so that you can apply them. Many seemingly complex patterns are based on very simple grids of circles, triangles, and squares. Many times the pattern uses these grids to create a unit that is repeated over and over again. Learning how to see these can help you develop new patterns to kolrose.

The first few patterns we will discuss are geometric in nature. They are based off grids and these ones are tessellations. That is to say, they repeat indefinitely. The ones I will show you are relatively simple in nature, but if you would like to see some of the most complex tessellations, look up the works of M.C. Escher.

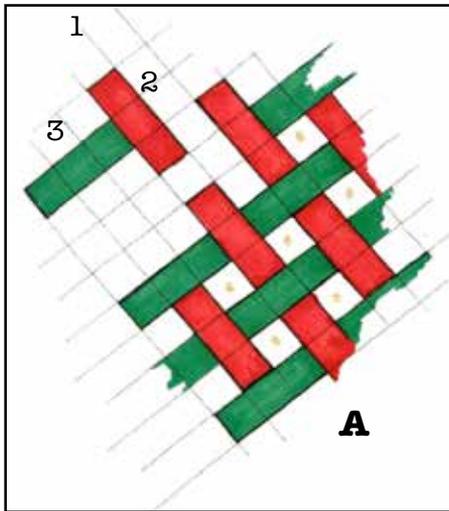
The next type of pattern in this section is more organic in nature. That is, the pattern does not repeat on any kind of grid. The pattern is primarily in the repetition of similar curves and shapes to make a design that is in harmony with itself. More about design and harmony in the section 'Thoughts on Form'.

Lastly I will take a very brief look into Celtic knot work. This type of pattern can get incredibly complex, but I will introduce a basic knot twist.

Each of these patterns has a set of numbered instructions. The number of the step can also be found on the corresponding illustration to draw your eye to that step. I do this because some of the steps are difficult to explain easily and an illustration is often the simplest way of understanding.

The basket weave is a very common weave based on a grid pattern and it's the first one we will begin to look at. There are many ways to arrive at a basket weave pattern, but I will focus on 2 of them. The first way of looking at the basic basket weave is focusing on the weavers as the basic unit. This basic unit is 3 squares in length with the end of one unit abutting the center square of another unit. See illustration A in this section. By varying the size of these units you can make changes to the weave.

The process for making this pattern is as follows.



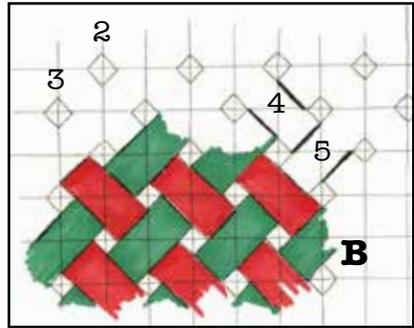
1. Mark off a square grid on your spoon. It helps to have a flexible steel straight edge to do this. Often an eraser shield (available in art and drafting supply stores) is ideal for this.
2. Take 3 squares abutting each other and fill them in. This is your basic unit.
3. At the middle of the 3 squares mark off another 3 squares that go out perpendicular to the first three.

If you continue this pattern with all the units you will end up with a basket weave pattern. Note that there are small squares between each unit. These empty squares can be decorated and form the basis of another way of looking at this weave.

The second way of looking at the basket weave uses the small squares between the weavers as the base unit.

1. Draw a square grid on your spoon.
2. On the first horizontal line, where it intersects with a vertical line, draw a diamond (or square). Do this on every other vertical line where it intersects the horizontal line.

3. Move down a row. On the second row you will put a diamond on the vertical lines that were left blank when you put diamonds on the first row. Continue to the third row and go back to the first set of vertical lines and draw diamonds. Continue this pattern until your grid is 3 filled with little diamonds.



4. When you look at your grid, you should see a diagonal grid of small squares. Connect two of the squares with a diagonal line, then connect two opposite squares with a parallel line. This is the base of the weaver.
5. Moving to the outside of the first set of squares draw a line perpendicular to the first. Move over a set and draw a line parallel to it.

If you continue this pattern you will have a basket weave similar to the first.

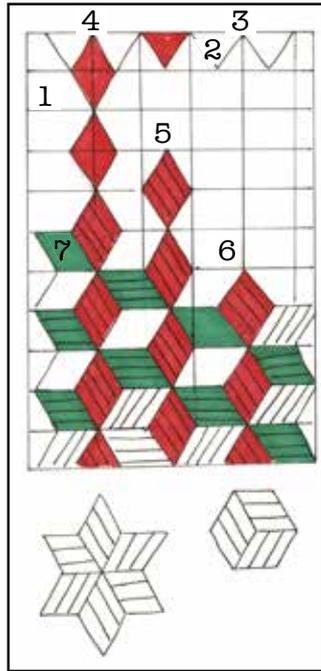
The weaves are slightly different, and by varying the size of the squares/rectangles you can create different weave patterns. I hope you enjoy playing with the pattern

C

Another basket weave pattern is based on 60 degree equilateral triangles as seen in illustration C. This pattern is more complex than the first basket weave pattern.

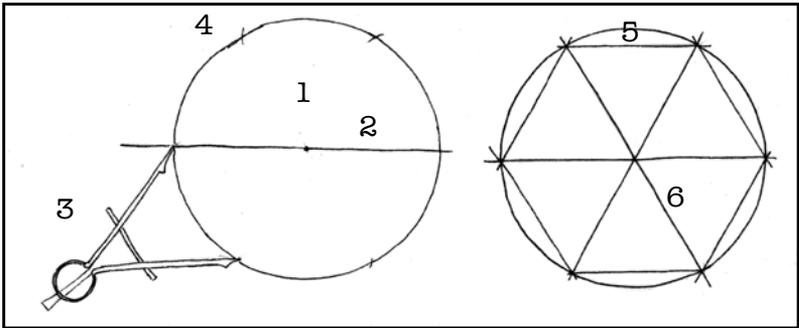
You do not often see this one on spoons.

1. Mark off parallel horizontal lines that are an equal distance apart. Ensuring they are equidistant is the most critical step.
2. At the top row, mark off equilateral triangles. It helps to be able to freehand draw them, but if not, see the tutorial on how to draw them with a compass.
3. At the top vertex of each triangle mark perpendicular lines.
4. On the first perpendicular line you will continue down making diamond shapes out of equilateral triangles to create a column. They don't need to be perfect in this pattern. (These columns are in red in the illustration.)
5. Move over between the next two vertical lines and mark off another set of diamonds. Note that they should be offset downwards by one row from the first column of diamonds.
6. Continue over to the next vertical line and mark off another column of diamonds, again off set. Continue these columns of diamonds until you have filled your area.
7. You should be able to see that between your columns of diamonds you have zigzag rows made up of diamonds that are laying on their side.
8. Note that all the vertical (red) diamonds have lines running the same way. All the green horizontal diamonds have horizontal lines inside and all the white diamonds are the same.

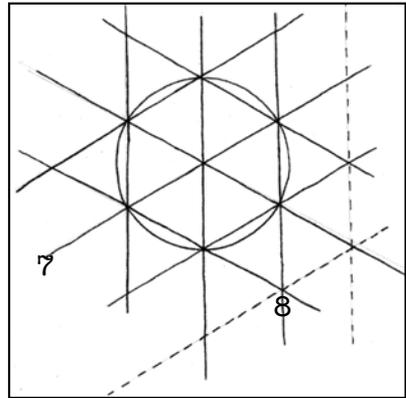


You should end up with base units like those seen below the figure. There are many variations you can use on this pattern.

Creating perfect equilateral triangles is impossible. It is possible to come close, which is all you need, really. Illustration D is an exercise that you can use with a drawing compass and a straight edge to teach yourself to draw equilateral triangles. It will also help you make equilateral triangle grids, which can be very helpful in drawing basket weave and other patterns. (Patterns you can discover on your own. If we chased them all here there would be no fun left for you.)



1. Start by drawing a circle with a compass.
2. Using a straightedge, draw a line through the center of the circle. You should be able to see it by the pinpoint left by the compass.
3. Without adjusting the compass, put the pinpoint on the straight line at the point it intersects the circle. With the pencil side, mark the distance on the circle.
4. Move the pinpoint to the new mark that you made and mark the next point on the circle with the pencil side. Keep moving around the circle in this way until you have six marks around the circle.



5. Draw straight lines between these points around the circle and you have made a hexagon.
6. Draw lines through the center of the hexagon that connect the points with the point directly across from it. In doing so you have created 6 equilateral triangles.
7. Creating a grid from this is a bit tricky, but possible. Start by taking the lines that pass through the center of the hexagon and extending them beyond the boundary of the hexagon. Then go around each side and extend that line out beyond the hexagon. You will find that you have created a star shape with 6 more equilateral triangles around the hexagon.
8. Place your straightedge on the point of one of the new triangles and make sure that the straightedge is parallel to the side of the hexagon. Draw a line parallel. Work your way around each side of the hexagon doing this.
9. You will notice that each time you do this you create more little triangle intersections. If you draw parallel lines at these intersections, you have perfectly sized equilateral triangles in a grid on your spoon.

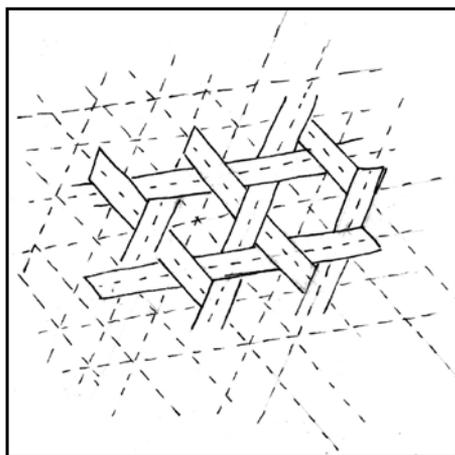
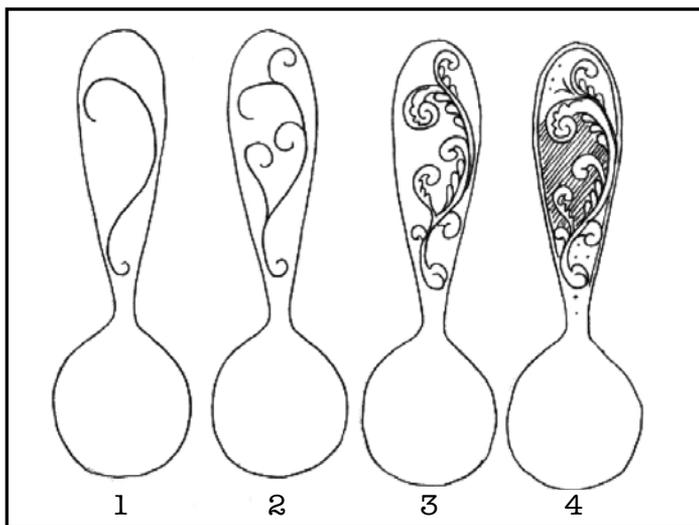


Illustration E is another hexagon/equilateral triangle based pattern that you can do. I won't write steps, but let you use the illustration as a guide to figuring out the pattern.

Next, in illustration F is an organic pattern.

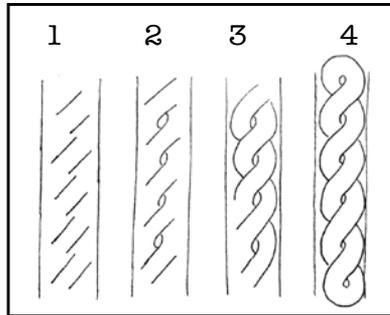


1. Start with your major curve or curves. If you are looking at somebody else's illustration, try to see which way the shape moves generally and base your curve off of that. If you are creating your own, draw a curve that will flow to each part of the spoon.
2. Draw secondary curves. Try to repeat parts of the major curve in the secondary curves. This provides harmony and visual balance to the design.
3. Fill in the curves with details.
4. Draw in a background and you are done!

The last bit, Celtic knot work, is somewhat a hybrid of the rigid basket patterns and the organic patterns. It has to simultaneously be even, parallel and follow specific geometric structures as well as flow in and through various shapes in an organic way. This combination makes it devilishly hard to do well.

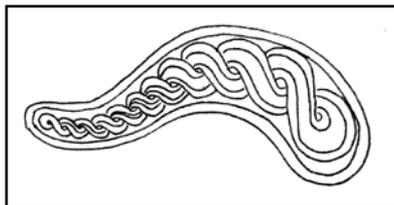
While I have dabbled with complex celtic knotwork on paper, I have yet to introduce it to my kolrosing. Because of this, I will introduce the basics with just a simple twist.

The main mistake that people make when doing this type of pattern is that they assume that they are drawing ropes intertwining each other. Because of that assumption they start at one end and begin drawing two sets of lines and twining them around another set of parallel lines until they reach the end. This often results in a twist that is uneven in spacing and size. You always need to begin by setting up a layout so that your pattern remains even.

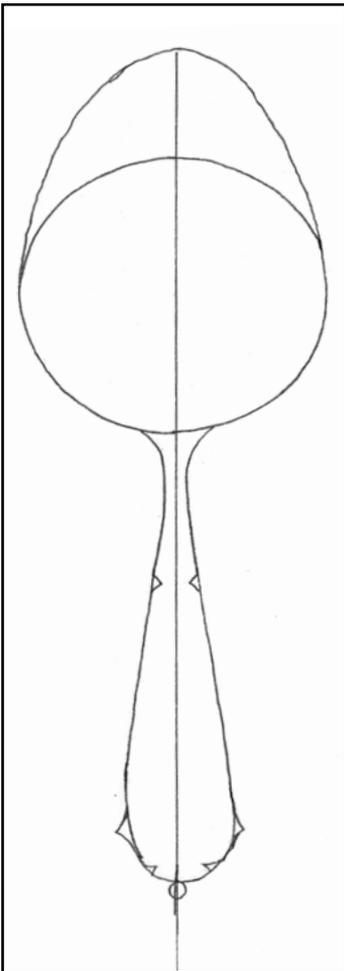


1. Determine the boundaries of your piece. Here I have parallel lines inside of which I will draw the knot work. I then draw sets of parallel lines. Notice that the top line is closer to the left hand vertical line and the bottom line is closer to the right hand vertical line. Also notice that there is a small amount of overlap from the top and bottom sets of lines.
2. Make 2 small curved lines connecting the top and bottom parallel lines where they overlap closely. This creates a teardrop shape.
3. Draw large curves connecting the lines that are further away.
4. Make loops at the top and bottom to complete the twist.

You can also adjust this twist to fit irregular shapes, as on the next page.



THOUGHTS ON FORM



This section is not directly related to kolrosing, but rather to spoon shapes. The reason I include it is because kolrosing should be part of the overall design of the spoon and should fit seamlessly with the rest of the design. I should note that all of the spoons I carve are meant to be used. Function always takes first place over aesthetics for me. If it will not be comfortable and practical to use, I do not carve it.

For a long time I carved functional spoons that were ugly -especially the handles. I struggled to find forms that were both pleasing and functional. In an effort to better understand handle shapes that worked, I looked at hundreds -if not thousands- of photos online in an effort to better understand them. In the course of time I realized that there are only a few basic handle shapes. Each of these handle shapes may be modified by adding or subtracting small amounts to create something new.

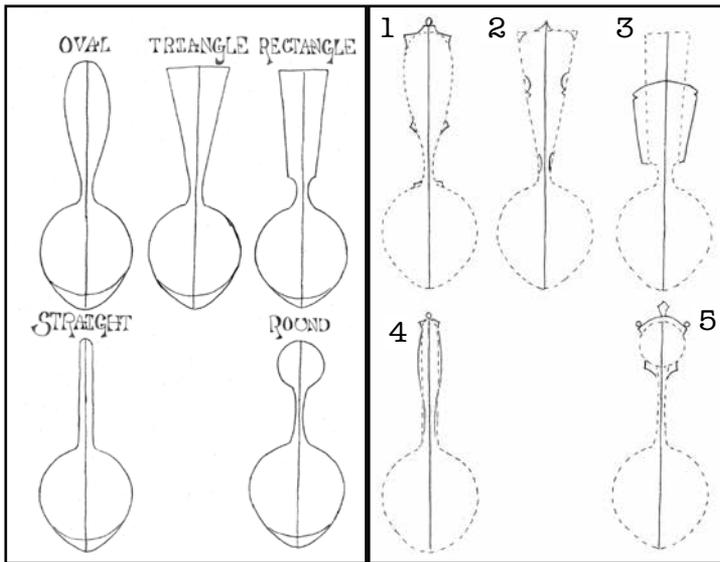
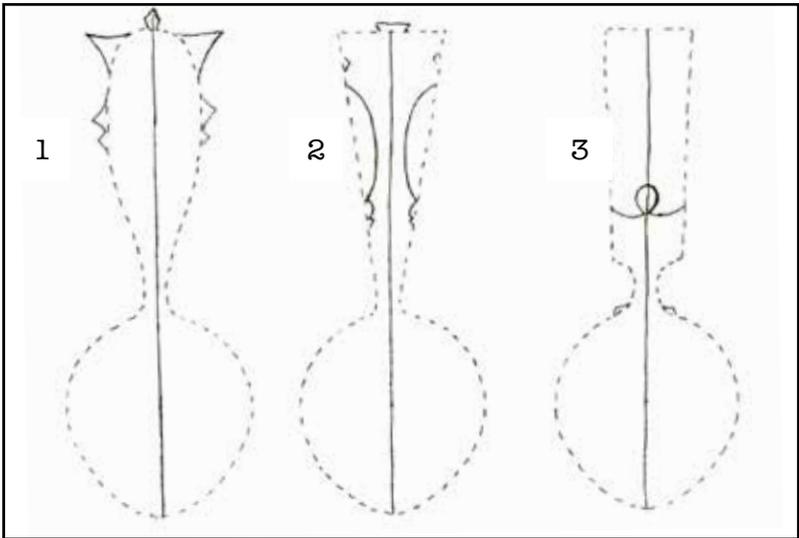


Illustration A shows these basic shapes.

1. Shows how adding a bit near the top or bottom of the handle, or where the neck and bowl meet can add interest. It is important to not add pointy bits where the spoon rests in the hand.
2. Shows how taking small portions away from the handle can add interest. When removing portions you can take away from mid handle. Notice that taking a pit from either side leaves a small point. This is fine. It will not rub against the hand because it does not extend beyond the basic shape as in the first example.
3. Shows how width and height can be changed dramatically on a form and still have a pleasing effect. I personally, though, have never liked handles wider than the bowl of the spoon. Also, if you carve a short handle, it is often more comfortable to hold if it is somewhat wide.
4. With straight handles, the addition to or subtraction from the design has to be more subtle to have a pleasing effect.
5. You can put any of the basic shapes on the end of a long neck, but it is the only place that I have seen circle shaped handles that look nice.

In each of these examples, the changes we made by adding or taking away relatively small amounts. Adding or taking away large curves from these shapes alters the form to the point that the aesthetic is not as pleasing or the function declines.

The next examples show what I consider poor design either because of aesthetic or function.



1. In this example the additions to the design stick out directly where the webbing of my thumb wants to go. This would be a painful spoon. In addition, the top is too wide. When you have a spoon shape that widens at the middle, then narrows toward the top, it needs to stay narrower than the widest point at the middle. I have seen very few examples where a spoon moves outward at the top again and keeps an aesthetically pleasing shape.
2. The cut outs in the middle are too deep. Your eye no longer has the ability to trace the triangle sides because too much of them are gone. In addition, leaving a large amount at the top and suddenly narrowing it makes the spoon more difficult to hold. The large top portion pushes your hand away from the holding part of the handle.

3. I actually think this is an aesthetically pleasing shape. The one issue I have is that the handle is so short it makes it difficult to hold and would probably shift the balance of the spoon too far forward into the bowl.

As you begin to kolrose your spoon, try and select a design that uses similar curves as the handle. The curves do not need to be exactly the same, but by including some similar curves it makes the piece work together harmoniously.

Lastly, these are ideas that work for me. As with any art, aesthetics are highly subjective and there will always be spoons that break these rules and look and function well. Don't be afraid to try things that break these principles.



What happens when I over shoot the line?

I was once listening to a radio program where they were interviewing a jazz pianist. The pianist told a story of when he was young and listening to one of his idols play. After playing he approached his idol and said, 'That was amazing! You didn't make one mistake!' The response was, 'I make mistakes all the time. The important thing to remember is that every note has a relationship with other notes. If you make a mistake, play something related to it and it sounds like you meant to do it.' You can use similar principles with kolrosing.

It is very common to accidentally cut beyond a joining cut. It happens to me all the time. This cut will never go away, however, there are things you can do.

1. You can burnish the cut. This will partially seal it. (It may be possible to fill with beeswax, too, although I have not tried this yet.) The line will remain, but it will be much lighter.
2. You can adjust your design so that it looks intentional. Can you add a flower there? Can the line continue into something else?
3. You can ignore it. This is a handmade item. Many people enjoy looking for the small imperfections that show that it was made by a human hand. The whole impressionist movement in painting was done partially in response to the perfection of photography. Mistakes can be beautiful.

Proper Lighting

Proper lighting helps immensely. Kolrose next to a single light source that comes from the side. This will expose the shadows of the cuts and make it much easier to see your work.

Simple is harder. Complex distracts from mistakes.

The absolute, hardest thing to kolrose is a perfect circle with nothing around it. It is nightmarishly difficult because your eye knows exactly what you were trying to achieve and exactly where you made a mistake. Making designs with lots of detail can help distract from those times you go over the line, have wobbly lines, etc...

Relax. Its hand made. Mistakes are okay.

I want to emphasize again. This is supposed to be fun. It is supposed to be handmade. You will make mistakes. Your first pieces you may think are downright ugly. Don't worry about it. Kolrose more. Try things that push your ability and you will steadily improve.

The Final Word

This book is not done. It can never be done. There is so much more to learn and to explore about kolrosing. The more I kolrose, the more I realize I am really a novice at the craft. As I have written this book I have learned new things that I have gone back and added. In the years following the publication of this book I will continue to learn new things. I hope, though, that it provides enough information for you to go forward with me in the discovery of this art.

GALLERY

Below is a gallery of my work. Most of these pieces are now owned and, hopefully, lovingly used by their new owners.



