Sarah Jaeger’s Joyful Bowls

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Exotic Wooden Tools
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On the Cover
Sarah Jaeger’s serving bowl, 10 in. (25 cm) in diameter, porcelain with brushed and trailed glaze. Photo: Tom Ferris. See story on page 22.
Personal Touches

The painter should not paint what he sees, but what will be seen.
—Paul Klee

As the holiday season approaches, I’m doing a lot of thinking about what gifts I’ll be making this year, and as usual, I look through some of the past issues of PMI for ideas. What I find are not just ideas about how to make or decorate something, but also some bits of inspiration to think about in general.

A good example is in this issue with Sarah Jaeger, our featured artist. She thinks a lot about the person who will use a piece she forms, glazes and decorates, and imagines how they will hold and view the work. By altering her thrown forms she adds a tactile quality to an otherwise plain bowl. And with her decoration, she even adds a little design work inside the foot that reveals itself when the bowl is in the dish rack.

Courtney Murphy thinks about someone using her pots, possibly hundreds of miles away, and considers this connection as one of the most important aspects of being an object maker. When it comes to making gifts, we know who we’re making something for and we understand this connection. As for making pots with an unknown destination, how might this affect your work? We are creating the things that will be both seen and used for years to come so the nuances and subtle details are very important.

We’d like to welcome back Rich Briggs in this issue. Not many of you were subscribers then, but Rich last appeared in the very first issue of PMI in January 1998 with an article about how to make a fish mold. We’re pleased to have him around again with his technique for making large pieces, and I hope he doesn’t wait another 14 years to appear again!

With this issue we’re publishing an article by Bill Shinn on making candle-labras. Bill passed earlier this year and we’ll miss his enthusiasm for ceramics, love of teaching, and contributions to the magazine. I’m sure many of the pieces he made over the years hold memories for the people who own and use them now.

Correction

On page 44 of the Ceramic Arts 2012: Yearbook and Annual Buyers Guide we published a glaze tip with some rather cryptic percentages:

Maroon: Try chrome oxide at x% combined tin oxide at x% for chrometin pink... (see page 46)

No, it’s not algebra but if you do want to mix up some chrome-tin pinks, the correct percentages should be: Chrome at 0.15–0.5% combined with tin oxide up to 7.5%. If you’re like us, those glaze tests will be a lot easier to do than that algebra.—Eds.
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Glaze Additives
by Jessica Knapp

Glaze additives are the secret ingredients that make average glazes great. Sometimes the glazes we use are fine for one application method, but disappointing for others. A glaze might perform well when dipping or pouring, but dry so quickly when brushing that your brush sticks to the pot. Commercial glazes might have the opposite problem, brushing easily, but having a consistency that’s too thick for pouring or dipping applications.

There are several glaze additives that help solve these various shortcomings, by conditioning your glazes for brushing, dipping, or pouring. They fall into the categories of suspenders and binders. According to Dave Pier (a ceramic artist who is well versed on glaze additives and has even developed one), most glaze additives do a little of both, fixing suspension problems while also enhancing the bond between bisque ware and the raw glaze. Some, like CMC Gum, Magma, and Spectrum Brushing Media, are organic, while others, like Spectrum Suspender, bentonite, Veegum-T, and Bentone MA/Macaloid, are clay-like materials. Spectrum’s Glaze Thinner is a sodium hexamethaphosphate solution, and Apt-II Ceramic Enhancer is an acrylic emulsion additive.

The organic materials and products are great binders, and also help with suspension. They need to be used in small glaze batches, or if added to larger ones, a preservative needs to be added as well to prevent them from rotting. The materials listed are best at keeping a glaze in suspension, but also help somewhat in binding.

Testing Methods
To test various additives, I used a transparent clear base glaze to which I added different Mason stains as colorants to differentiate each one.

For the manufactured liquid products, I followed the instructions on the label for how much to add to a specific volume of already mixed glaze. For the dry materials, I used 20 grams of suspender/binder added to 100 ml (100 grams) of water. I allowed the dry material to absorb the water overnight, then mixed it thoroughly. I added it to the glaze at a volumetric ratio of 1 part binder to 8 parts glaze. Some suspenders are more potent than others, so as a general rule use between 0.5% and 2% by weight (of the dry ingredients). Testing is key for figuring out the ratios that work best. For really small quantities of glaze, add the suspender by the drop until it has the desired consistency.

Brushing
Bentonite and Veegum-T are not as beneficial for brushing applications as they don’t really change the rate at which the glaze dries. The brush still tended to stick and drag across the surface.

CMC Gum, Apt-II, Spectrum Brushing Media, and Magma all improved the glaze’s brushability. They slow the drying time, allowing for more movement of the
glaze before it soaks into the bisque-fired pot, and reduce the surface tension of the glaze so that it’s more willing to flow rather than just stick to itself. Once the first coat of glaze was dry, a second coat could be brushed on without disturbing the first coat.

Tip: If you don’t have any of these materials on hand, a few drops of liquid dish soap added to a glaze can improve brushability by reducing the glaze’s surface tension. It won’t affect the durability of the dry glaze surface though.

When brushing colored glazes over a raw base glaze, I found that CMC Gum, Apt-II, Spectrum Brushing Media, and Spectrum Glaze Thinner helped, as they dried more slowly and flowed smoothly.

Dipping and Pouring
Bentonite and Veegum-T work well for dipping and pouring, as do Spectrum’s Glaze Thinner and Suspension Agent. The glazes required less stirring before use, and adhered well to the test tiles.

For the glazes tested, CMC Gum, Apt-II, Spectrum Brushing Media, and Magma allowed for thicker glaze coatings when dipping. Glazes with Magma added to them can be built up into very thick coatings without chipping.

All of these products are also suited for techniques that call for carving away glaze. Since they improve binding qualities of the raw glaze, the glaze coating is harder, and therefore the carved lines can be very precise.

Re-glazing
CMC Gum, Magma, and Spectrum Brushing Media helped when attempting to re-glaze an already glaze-fired piece. They worked even at room temperature; however, as they take a little while to dry, the process took longer and the coats tended to be thin. Glaze material did build up on the surface though, and so when pieces were pre-heated, the re-glazing process went faster and was an improvement over results without additives.

Apt-II was the only product that enabled a thick layer of glaze to be applied in one coat to the surface of an already glaze-fired piece without pre-heating the piece. It’s an acrylic-based medium and so has different properties than the other three products tried, which are organic gums.

Conclusion
If you apply your glazes in a variety of ways, the best thing to do is to have a large container of your base glaze and pour some into smaller containers then mix in the appropriate additive for this smaller amount. If the larger glaze batch doesn’t behave well, you can then add a suspender/binder (and preservative if using an organic binder) to the mix.

We would like to thank Apt-II (www.apt2products.com), Brackers Good Earth Clays, supplier of Magma (www.brackers.com), and Spectrum Glazes (www.spectrumglazes.com), for supplying products for testing.
Exotic Wooden Tools
by Frank James Fisher

When artist Mike Kuhn began fashioning custom wood tools to improve his ceramic forms, little did he suspect where his explorations would lead him. An experienced woodworker for more than 30 years, he is adept in the woodshop with the various equipment used to sculpt and smooth wood into shapes. But it was Kuhn’s knowledge of the virtues and limitations of specific woods that gave him the initiative to create his own versions of wooden throwing tools. Now he produces dozens of distinct styles of wood tools in exotic hardwoods for a rapidly expanding list of dedicated potters.

Kuhn’s approach to wooden throwing tools started by evaluating the wood species most often used in tool production. Most wooden pottery tools are made from common hardwoods. Unfortunately, grogged clay is extremely abrasive to the wood surface. “Most wooden tools are not designed for long term use. They are a consumable tool; when the tool wears down, you replace it,” explains Kuhn.

Kuhn knew of several tropical hardwoods with an extremely dense cell structure that would be nearly impervious to wear. With some research and testing, he selected cocobolo (*Dalbergia retusa*), a Central American tropical rosewood. He selected it because of the beauty of the grain, the density of the wood, the natural oils that make it resistant to water, as well as its availability. The wood is highly valued and has been heavily exploited in the wild. Kuhn uses only wood acquired through commercial tree plantations. “Cocobolo is a beautiful wood. It’s hard as iron and it will sink rather than float in water,” stated Kuhn. Since cocobolo is part of the rosewood family, many other rosewood species also work well, including Belizean rosewood, Bolivian rosewood, and Madagascar rosewood. For a local hardwood, walnut, especially claro walnut, is a good choice, though it does not have the natural oils and can become waterlogged.

Selecting the perfect hardwood did not provide a complete solution. The choice created two new challenges. First, fabricating wood tools from a dense hardwood requires specialized equipment to cut and shape the wood. The standard wood working tools are not engineered for
cutting extremely dense hardwoods. Saws, grinders, and sandpaper and other abrasives need to be upgraded to handle them. Diamond-hard blades and grinding wheels are required.

The second challenge involved the oily sawdust. There are health concerns when working with exotic hardwoods. “You want to avoid breathing sawdust from any wood. But with cocobolo, there is even more of a concern. If inhaled or exposed to skin, the oils found in the cocobolo wood can cause allergic reactions. I wear a dust mask. I also keep my skin covered, including wearing gloves,” stated Kuhn, “The dust is a serious health risk. You need to take precautions and give it the proper respect.” Cocobolo is only a health risk during fabrication processes. The finished tool will not cause allergic reactions.

What makes cocobolo wear resistant? The wood grain is extremely tight and dense and permeated with natural oils. The oily surface repels water, so the wood grain does not soften or swell. The result is a waterproof finish that is strong enough to resist the gritty abrasive wear of grog. No additional finish needs to be applied. Although the oils do remain in the wood forever, sometimes after long, hard use, the thin layer of the outer surface can appear to dry out a bit. To bring back the original luster, lightly sand with a fine grit sandpaper to remove the dry surface, then buff it back to a shine.

Kuhn begins the tool making process with a cocobolo block roughly cut to the final tool shape (figure 1). Then the wood is slowly ground using Kuhn’s experienced eye to guide his movements on the grinder. There are no jigs or cutting templates. Each piece is hand formed through a series of grinding wheels—each with successively finer abrasive grit (figure 2). Once the wood tool has achieved its finished form, Kuhn begins the final stage on a rouge polishing wheel. Rouge buffing gives the natural oils an intense polishing, resulting in a finish similar to hand-polished furniture.

Kuhn believes his knowledge of ceramics gives him a special insight into tool design. “Because I use these tools daily, I know how I want a tool to perform,” reflected Kuhn.

Kuhn has explored the form and shape of the standard wooden throwing rib. Additional gripping holes along the flat surfaces provide a secure indent to hold the tool against the pressure of spinning clay. Because cocobolo resists wear, Kuhn can create pointed tips that won’t grind away or break. “Cocobolo wood has opened a wide range of possibilities for me to explore. It has brought a new approach to my own art and I hope a positive experience to others,” said Kuhn.

Mike Kuhn can be contacted by email at: barefootpottery101@yahoo.com or through www.barefootpotterytools.com. Frank James Fisher is an artist, author, and educator living in Milford, Michigan. He can be reached through his website: www.frankjamesfisher.com.
The one piece of equipment in the ceramic studio that breaks easily is the peephole plug. They’re often bumped on the kiln, dropped and cracked, misplaced, broken, chipped or worn out. Fortunately, there are several ways to make new plugs to replace the old ones, with the advantage that each plug can be custom fit to each peephole in the kiln. Making the plug by hand-building, throwing, or cutting brick does not require any additional special tools or techniques.

Anatomy of a Peephole Plug
Most peepholes are ¾–1¼ inch in diameter and range from about 3–5 inches in overall length. The bottom 1–2 inches form the handle. The handle is wider than the opening, which makes holding and handling easier, keeps the handle cooler, helps reduce heat loss, and prevents the plug from going too far into the peephole. Peephole plugs are often only fired to bisque temperatures as they are subjected to extremes of temperature from the inside to the outside of the kiln. The inside could be close to 2300°F, while the outside might be 100°F. Bisque-fired clay is open enough to resist this thermal shock.

Insulating Brick
Using a hack saw, cut a 2000–2400°F rated insulating block to 1½×1½ inches in height and width, and to a length of 4½ inches. Cut this into four equal parts, then taper the four corners of each. Next, sand each peephole plug with coarse sandpaper and a rasp to form a truncated cone shape, leaving the one end square to serve as the handle. The end that goes into the kiln should be ¾ inch in diameter (figure 1). Additional sanding may be necessary to shape the cone to fit the kiln peephole. Note: Insulating fire brick contains silica. Wear a dust mask when cutting and sanding to avoid inhaling the dust.

Clay
Any high-fire clay can be used for throwing or hand-building a peephole plug. The final shape should take into account shrinkage and the tapered peephole opening. Most high-fire white or light-colored stoneware, porcelain, or sculptural clays suffice to make a plug. Avoid using iron-rich clays as iron is a flux, especially at higher temperatures, and could cause problems. The end of the plug during the firing reaches high temperatures nearly the same as inside the kiln, thus low-temperature clays should be avoided.
Wheel Thrown
To throw a peephole plug, open the clay to about ½ inch wider than the peephole (plus more for the shrinkage of the clay body) then shape into a cylinder (figure 2). It is further fashioned to a slightly tapered peephole plug shape, and then the top is pushed over closing the hollow shape. A rib or template shape is cut to the peephole plug contour making it easier to finalize the shape. The form is allowed to stiffen and used as a model for making a slip-cast form (figure 3) or used as is.

Handbuilt
Roll out a slab of clay, cut a trapezoid shape and curve it into a hollow cylinder about 5 inches high and a diameter that, when shrinkage is calculated, fits the peephole. Roll the top to make a collar. This becomes the handle. Allow it to stiffen, then flare the bottom 1–2 inches by inserting a dowel rod or tapered paintbrush handle into the opening (figure 4). Roll and shape the cylinder to form a hollow plug. Complete any additional shaping with a rib. Push the end of the plug over to close, leaving only the handle side open.

Slipcast
Secure a leather-hard peephole plug model to a smooth surface. Place a cardboard cylinder that’s 1½ inches wider and ½ inch higher than the casting plug over it. Coat the interior of the cylinder with mold soap to make it easier to remove later. To hold the cardboard in place and prevent any plaster from leaking, press a clay coil around the outside. Mix plaster and pour it into the tube to fill it. Slightly vibrate the table under the cardboard to settle the plaster and bring the air bubbles to the surface. Remove the cardboard once the plaster is set, then allow it to cure. The clay model will shrink and fall out of the mold during the drying process.

Slip casting from this plaster mold provides an easy way to make peephole plugs. Pour a high-fire, low-iron casting slip into the mold and allow it to set, forming a ¼ inch thickness. Pour out the excess slip. Once it releases from the mold, trim it, sponge it smooth, and allow to dry. After bisque firing, it is ready to use.

Filled Peephole Plug
A solid or filled peephole plug is stronger, harder and adds insulating properties. To make a filled peephole plug, a hollow, cast peephole plug can be filled with a variety of mixtures including: sawdust/coffee grounds, vermiculite, gog, crushed insulating brick crumbs, ceramic fiber, or a combination of these. If filling with a liquid clay mixture, do this prior to the bisque firing.

John W. Conrad is an author of technical books for the studio potter, professor emeritus of Mesa College in San Diego, and guest professor at Luxun Academy of Fine Arts, China. He lives and works in Encinitas, California.

For information about the annual Peep Plug Show, go to Skutt’s website at www.skutt.com/peepshow.
Several years ago I made a large thirteen burner candelabra. All of the tubes were thrown, trimmed, then cut apart, which was pretty time consuming. Later on, it occurred to me that an extruder could be used for that part of the process, making the parts in a fraction of the time needed to throw trim and alter them. A third possibility also emerged; creating a press mold and then using slabs to make the forms. The three processes, one hand-building with thrown forms, the others handbuilt with extruded forms, and with slabs and press molds, can lead to forms with different character. So the choice of forming methods depends on the design and the project’s time line.

Throwing
Start by throwing a double walled doughnut. Center then flatten a ball of clay (at least 2 pounds, or more for a larger diameter doughnut like the one shown here). Leave a wide ring of clay after you open down to the wheelhead and create the open center area. Pull up the two walls separately, alternating between working on each (figure 1), then bring them together at the top and round it off with a flexible rib (figure 2). When leather hard, turn the round form over and trim it into the familiar tire inner tube shape. Make three or four different size rings to fit together as shown (figure 3). When leather hard, they can be split across the center to form the upper sections for two candelabras (or menorahs).

Mold Forming
To create a candelabra using press-molded pieces, the first step is to create a model of your design. Here, a top-half section of the final three-ring piece is first thrown on a wheel. The half tubes can be solid clay since after the casting of plaster, they will be removed and recycled. Tip: A ‘C’ shape, cut out of an old credit card, makes an excellent rib/template to form the identical half tubular shapes. A clay wall is then wrapped around the bat to hold in the plaster (figure 4). Once the clay rings are leather hard, mix Pottery Plaster #1 to the right consistency based on the manufacturer’s directions and pour it carefully over the forms (figure 5). Note: Be careful not to splash the plaster, as this can cause air bubbles to form. If the air bubbles stay on the surface of your piece, they’ll cause an imperfection in the mold. After the plas-
Make three rings, carefully measuring so they will fit snugly together.

Center and open a ring of solid clay. Raise two walls and work the clay together at the top.

Shape and smooth the closed-off ring with a metal rib or custom-made template.

To make a press mold, form three solid half tube rings and encircle with a slab wall.

Mix and pour enough plaster to create at least a ½-inch thick bottom for the mold.

Drape a clay slab over the mold and press it lightly into the recesses.
The slab strip that connects most of the curved sections of the candelabra is the base for the candle supports. Be sure to measure your candle support design carefully, and account for the shrinkage of your clay so that after the firing they'll be the right size to hold the candle bases securely.

The holes and supports for the candles can be created in many ways. The example shown involves stamp cutting each candle socket using various size brass pipe ends. Cut one large circle, and one smaller one, then slip and score them together. Next, cut the center hole. **Tip:** Use a power hole cutting bit to create a hole large enough for the supports, deepen the candle holder socket, and at the same time producing a venting hole in each chamber for firing (figure 10). Let the entire assembly dry slowly under plastic before bisque firing.

**Extruding**

You'll need a die form designed to make hollow forms in order to create the candelabras shown. These are available through most suppliers or can be made from sturdy plywood, Corian, or metal. The first step is to draw out a pattern upon a sheet of foam to use as a guide in laying out the curved rows of tubes. Guide the clay while extruding into the approximate desired curve (figure 7). Do not try to bend a straight tube. Like a metal form, it will kink. The curved tube is much more rigid than the straight one as compound curves are stronger, so the clay can be placed with minimal distortion over the drawn pattern (figure 8). Minor adjustments can be made for the correct curvature.

When leather hard, attach the curved tubes vertically to a slab strip. After adding a foot (figure 9), turn the piece over and attach the candle holders.

**Candle Supports**

The late Bill Shinn was a frequent and long-time contributor to Pottery Making Illustrated, and influenced and inspired many artists through the project ideas in his articles, as well as the techniques he shared through the many workshops he taught over his long career. He will be missed greatly by our community.
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There are many ways to add clay to make larger forms. If wedging and centering 25 pounds of clay seems a daunting task, here’s a practical way to increase the amount of clay you need centered. This method can be used with any combination of clay amounts, 16 pounds plus 8 pounds for example or 8 pounds plus 4 pounds, etc. I like to use a sandy stoneware clay body, which is more forgiving of this process, because the sand adds a little tooth or grip as you throw.

“My students and I talk about the three “P’s” of pottery: patience, perseverance, and practice. All three are important for making large jars, with the first seeming to take precedence.”

– Rich Briggs
Centering Big

To make a large jar, center 16 pounds of clay. Although this may sound intimidating, because the piece you are building is dried at several stages throughout this process, it can be quite soft for these beginning steps, which makes centering much easier. **Tip:** To make the task easier, try wedging smaller amounts of clay and use the ‘stacked snowman method’—one ball stacked on top of another and centering as you go. Be careful not to trap any air bubbles between the stacked pieces or oversaturate the mound with too much water. Also, pre-center the mound by patting it with both hands as the wheel slowly rotates and before you add any water.

Using your body for leverage, center the clay with the wheel spinning at a moderate speed. Use a sponge to keep the mound wet and avoid stopping for water too often. A small sponge may not be enough but a rectangular kitchen sponge works great. When opening, place the sponge over your finger tips and press firmly down into the center of the mound, opening with your whole hand. The sponge helps maintain a smooth interior as you open. After opening, pull the walls up thick and even (1½–2 inches thick throughout) with a beveled edge angled in. With calipers, measure slightly lower than the top edge (figure 1).

**Do It Again**

If throwing on a bat, remove the bat supporting the first cylinder from the wheel then center and open an eight-pound ball of clay on another bat. Open this piece completely down to the bat so that the cylinder doesn’t have a bottom. Form a beveled edge at the rim that is higher on the **inside** edge. Measure the outside of the beveled edge with calipers. Place this piece upside down on the
larger cylinder. Holding the bat, invert, line up, and level the beveled edges, fitting them together snugly (figure 2). Cut the bat away from the clay and what was the bottom edge is now the top rim (figure 3). Note: As long as you throw the two pieces one right after the other and the first piece isn’t allowed to dry at all, there is no need to score and slip when joining the two cylinders.

**Joining**

With the wheel turning slowly, smooth the edges together and pull and thin the joined cylinder, making it taller. It’s very important that the cylinder walls be thick and even just above and below the area joined or there could be the possibility of collapse at this early stage. Because of the beveled edges, the joined area will be only slightly thicker than the cylinder walls. Continue to pull slow and steady through the joint to achieve a uniform wall throughout the form. The connected cylinders are still relatively thick and even.

At this point, it’s helpful to dry the clay some so it can withstand further thinning and shaping. With the wheel rotating slowly, use a heat gun on the inside and a fan on the outside. Using both the fan and the heat gun allows the form to dry more evenly. It helps to mount the heat gun on a light stand so you can do other things while the pot dries (figure 4). **Tip:** A heat gun used for stripping paint (available at home improvement centers) is preferred to an open flame for safety reasons and also because it can be placed down inside the pot without extinguishing. Use the heat gun only for short intervals, three to five minutes at a time. Caution is needed to not dry the clay too much since there is much thinning and shaping yet to come. Forced drying means a pot can be thinned and shaped in an hour, rather than having it spin for several hours.
Shaping

With firmer walls, it is now possible to shape the base into a rounded sphere. Using pressure from the inside hand and support from the outside hand, a gentle outward thrust is maintained to shape the vessel (figure 5). When the walls are a reasonable thickness (can be less than ½ inch), I refine the shape with a rib (figure 6). When the vessel is almost tall enough that your whole arm fits inside, Paul Soldner’s advice to “throw naked” might come in handy. I’ve lost more than one pot by getting it caught on my shirt. Allow the body to set up to leather hard in preparation for an added neck piece. Keep the rim moist by covering it with a strip of plastic while you throw the last section.

Adding the Neck

Throw a small amount of clay (3–5 pounds) to be inverted to form the neck and upper rim. With calipers, measure ½ inch larger than the rim opening of the tall form. Score and slip both surfaces and press them together firmly (figure 7). Inverting this piece not only ensures a good fit, but also a thicker rim, which can be manipulated in a variety of ways for a pleasing design (figure 8). Trim the piece right side up when it is leather hard (figure 9). Tip: If the neck is wide enough to get your arm in, place a pushpin on the inside a few inches up from the base. Trimming is done until you hear the “click” of the pin. This ensures the clay is neither left too thick or trimmed too thin. A cross section of the finished piece shows even walls throughout and smooth transitions where the original sections were joined together (figure 10).

Rich Briggs is a ceramic artist and professor at Brigham and Young University’s Idaho Campus in Rexburg, Idaho. To see more of his work, visit http://richbriggshome.com.
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Adding Joy to Your Pots

by Emily Donahoe
Geometric patterns and forms combine with organic, plant-inspired lines in artist Sarah Jaeger’s inviting functional pots. In her hands, a modest, wheel-thrown serving bowl becomes something special with some easy alterations and a layered, wax-resist glazing technique.

The alterations developed over years of playing around with simple geometric forms—dividing up the space, making rounds into squares, and just seeing where things went.

“A lot of the evolution just comes from working on the wheel and doing something and then thinking, well, what would happen if I tried this?” she explains. “So it doesn’t start out as high concept all the time.”

Sarah says that the alterations are “both visual and tactile—and both of those things come into play with functional pots.” Add to that Sarah’s love of decoration and the surface of the bowl becomes a space where pattern and irregularity meet. She says her goal is to make a bowl that functions well, that’s also beautiful and adds some joy and a sense of festivity to someone’s meal. For her, it’s about making things more joyful.

Throwing and Altering

Sarah’s small but well-appointed backyard studio looks out onto a sunlit garden. Her dogs, Archie and Oona, laze nearby as she goes about her work.

“This is, in many respects, a very simple pot,” says Sarah as she centers a 4½-pound lump of clay on the wheel in preparation for making a serving bowl. She is working with porcelain, which she prefers because of its translucent quality. “With porcelain, even when the pot is unglazed or even if it is a monochrome glaze, you get a lot of interesting play of light and shadow that I think is very beautiful,” she explains.

Throwing the bowl starts out normally, the tool, and to refine the transition between the volume element and then the foot, so a little extra clay leaves me some leeway to play with.”

Using a trimming tool, Sarah removes excess clay from the bowl. As she trims, first creating the outer diameter of the foot and then the inside diameter, she taps the area she’s working on every once in a while to gauge its thickness. She then trims another flange to echo the one she’s thrown into the bowl. After she’s achieved the shape she wants, Sarah continues to remove excess clay until the bowl is of the right heft.

“I'm pretty fussy about the weight of the pots,” says Sarah. “There’s something about the way a pot looks that sets up an expectation for what it’s going to weigh. With a bowl that I intend to be a functional pot, my goal is not to mess with people’s expectations about what it is or how it functions.”

After trimming, she goes over the surface with a rubber rib to smooth out any lines from the tool, and to refine the transition between the rounded bottom and the outer flange (figure 5).
Sarah’s Joyful Process

1. Define the split rim using the back of a thumb pressed down in the middle.

2. Use ribs on the inside and outside to compress the walls and remove throwing lines.

3. Refine the split rim using a wooden knife or rib while supporting the rim on both sides as you work.

4. Divide the rim of the bowl using a circle divider and marking tool. Press in at each mark, creating six lobes.

5. Refining and smoothing the trimmed surface using a rubber rib to remove any lines or marks.

6. Draw a design on the inside of the freshly glazed pot using a pencil.
After painting in the leaf forms using a colored wash, trail on green glaze line decorations. Additional red glaze decorations are trailed on next. The trailed glaze should be thicker so it does not run.

Use a tinted wax resist to protect the painted and trailed patterns and shapes. After the wax dries, paint a layer of wash, here copper sulfate, over the surface to create another layer.

“Her goal is to make a bowl that functions well, that’s also beautiful and adds some joy and a sense of festivity to someone’s meal. For her, it’s about making things more joyful.”
Decorating

Sarah works atop the New York Times Arts and Travel sections—after she’s read the articles, of course. She wears latex gloves to protect her hands from the abrasive glaze. After waxing the foot of the bisque-fired bowl with paraffin, she uses tongs to dip the bowl into a clear glaze, allowing it to dry for a bit before beginning the first step in decorating.

“This is another one of my secret tools: it’s a no. 2 pencil,” Sarah explains as she draws a simple leaf pattern inside the bowl (figure 6), and then uses a paintbrush to fill in the patterns with a wash of rutile and Gerstley borate. She applies a thin layer for a translucent, cloudy effect (see figure 7).

As she works, Sarah explains that her decorations have evolved out of hand repetition and “responding to the curve of the pot.”

“A lot of my glaze decorations started out as very geometric patterns and over the years evolved into more botanical patterns. The longer I did it . . . the more organic the lines and the forms and those decorative motifs became,” says Sarah. “I like patterns that are pretty organized and symmetrical but then, when the pot gets fired everything softens and relaxes. There’s a kind of nice contradiction there.”

The next two glazes are applied in thick, dense lines. The first is Reeve Green, mixed very thick to give the bowl some texture (figure 7). Sarah applies the glaze using Clairol color applicator bottles, which she gets at a beauty supply store. She then uses the same technique with an orange-red glaze, which is made from the same base glaze as Reeve Green, but with red inclusion stain added (figure 8). On the outside of the bowl, Sarah uses the same elements in a different arrangement; she decorates the bowl all the way down to the underside of the foot, filling in the spots between leaves with simple waves and crosshatches.

“It’s a three-dimensional pot,” says Sarah. “I think it matters to pay attention to all of it.” Plus,” she adds, “when people wash dishes, they love that the undersides are decorated. One time this guy in California emailed me a photo of bowls in the dishwasher.”

Wax and Wash

Wax resist is an old technique, but Sarah finds that she uses it a little bit differently than most potters.

“One thing that caused me to keep playing with this technique is that I really love surfaces that have a sense of depth,” says Sarah. “It confuses that figure-ground relationship—and for some reason that confusion really interests me.”

Sarah uses a color-tinted Aftosa wax to go over the decorations on the bowl with a Japanese-style brush (figure 9). This type of wax helps her to see what she’s done and also brushes on more easily than paraffin wax.

“The wax will repel anything that goes on over it. Some other waxes that flow and brush well don’t seem to resist the cobalt sulfate as well as Afrtos,” explains Sarah. “So I will paint with wax on all the parts of this that I want to remain what they are now.”

Sarah’s final step is to brush a cobalt sulfate wash over the entire bowl (figure 10). She mixes the colorant with water by eye, testing it on newsprint to see that it is the right concentration before applying it to her work. Sarah explains, “The form of cobalt sulfate that I use, because it’s water-soluble, you get a really soft line. Just like when a watercolor goes on paper and it bleeds into the paper, as the water of the cobalt sulfate wash evaporates, the cobalt bleeds into the glaze, so the line quality is really soft.”

Note: Cobalt sulfate, like all soluble salts is easily absorbed into the skin. It is important to wear latex gloves when working with this, or any other soluble salt colorant. It is not recommended to use this material in group studio situations.

As she finishes up the pot (figure 11), Sarah reflects on the paradox of spending so much time discussing technique—and so much time decorating a single pot.

“At the end, you don’t want the person who is using the pot to think about technique at all. You don’t want it to look like it was a lot of work; you just want it to look like itself.”

Sarah Jaeger lives and works in Helena, Montana. To see more of her work, visit www.sarahjaeger.com.

Emily Donahoe is a freelance writer living in Bozeman, Montana. She has written for Ceramics Monthly, and other publications.
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Combining clean lines and spare but playful decoration gives Courtney Murphy’s work an inviting, slightly retro feel.

I’ve always been drawn to spare and simple forms, and much of my time is spent looking at textiles, artwork, and household items from the mid-20th century. I have a deep appreciation for simple, well-designed industrial objects, as well as children’s artwork and folk art—things that are less refined and show the hand of the maker. In my work, I attempt to seek a balance between these two interests. I strive for the clean lines and gracefulness, while my drawings and color choices are more influenced by children’s artwork and folk art. The simplicity of the form creates a canvas for a more playful element in the drawing.

Making a Big Switch

For many years I worked with a white mid-fire clay. I used underglazes, drew incised lines, and created areas of color on a white background. I liked the work that I was making, yet it didn’t really feel like me. It felt somewhat too clean and precise.

During this time, I would often take classes and workshops focused on earthenware. It was fun to work on a larger scale, to work a little more loosely, coil building new forms and trying out new surface decoration techniques. I liked the option of working on a larger scale that earthenware provided, and often thought about switching over, but at the end of each class or workshop, I would always return to my white clay, where I felt more comfortable.

I spent the fall of 2009 assisting Jerilyn Virden at Penland School of Crafts. Jerilyn creates beautiful double-walled forms using earthenware. Living at Penland for two months, and working with earthenware every day provided me with the right incentive to change my clay body as well as my style of work. It was a bit of a bumpy transition, as I tried to learn a new palette of glazes and surface decora-
tions, but at the end of two months, I had a few pieces that seemed promising.

That winter, I left for Montana to begin a two-year residency at the Archie Bray Foundation. Once I arrived, I immediately started testing slips and glazes. I really loved Posey Bacopoulos’ cone 04 satin majolica recipe. At Penland, we had been working with earthenware in the 02 to cone 2 range, and Posey’s glaze was beautiful at cone 01—no longer satiny, it looked more like enamel. I'd originally envisioned using a satin glaze, but I liked the way my drawings fused into the surface of the glaze at a higher temperature.

**Waste Not, Want Not**

After all of those years working in white clay, I had a huge supply of underglazes. I didn’t want the jars to go to waste, so I started testing all of my colors over the majolica to see what would happen. A surprising number of the underglaze colors looked great, those that didn’t were very dry or bubbled. I put a big ‘X’ on those and boxed them up, so that I wouldn’t accidentally use them. The colors I use are mainly Amaco Velvet underglazes and Duncan underglazes. Testing is required as certain colors will work fine, but a similar shade won’t work. I often mix the colors that do work to create new shades.

After switching to earthenware, I started brushing two to three thin layers of a terra sigillata on the bottom of bone-dry work to enhance the color of the clay and create a nicer feel on the bottom (figure 1). Once the sig has lost its sheen, I burnish it by wrapping a plastic grocery bag tightly around my thumb and rubbing the coated area (figure 2).

**Glazing and Decorating**

After the work has been bisqued to cone 04–05, I begin glazing. I don’t use wax, mainly because I’m pretty clumsy with it. Instead I scrape the excess glaze off with a rubber
rib, then sponge the rest off, leaving about ¼ inch of the clay exposed on the bottom (figure 3). To cut down on drip marks, once the glaze has dried a little, I use a soft drywall screen to sand out the larger drip marks. I always wear a dust mask and sand while holding the piece away from myself and over a bucket of water to minimize dust (figure 4).

Because the glazing and decorating process takes a while, glazing is done in small batches. I use three different colored versions of my base glaze: yellow, pale mint green, and white. I try to focus glazing with one color at a time, otherwise it gets confusing, as all of the glazes look the same in the bucket. This helps me to avoid touching up a piece with the wrong color.

When I first switched to majolica, I knew that I would miss the precision of the incised lines, but found that an 18-gauge slip-trailing bottle creates a very nice, fine line (figure 5). A 16-gauge bottle will form a thicker line. I use this less often, but it is useful for drawing dots on pieces.

I fill the bottle with underglaze and add water if needed to get a smooth flow. Before drawing on a pot, test that it’s flowing evenly on a piece of paper. Globs do happen occasionally, but they are easy to clean up if you let them dry then scrape them off of the surface using a metal rib (figure 6). After scraping, rub out that spot with a finger and redraw the line.

There is definitely a window of time when this process works best. I start drawing lines on top of the majolica about a half an hour after glazing. Line drawing comes fairly easily as long as the glaze doesn’t get too dry and powdery. Once it has reached this stage, the slip trailer does not flow as easily. Lightly misting the glazed piece with water sometimes helps, but it’s much better to decorate while the glaze still has some moisture in it.

When not in use, I plug the slip-trailing bottles with a sewing pin (the type with a little bead on the end). This works really well, and it’s nice to have the pin available in
case the tip gets clogged. It’s important to remember to keep the pin in the tip when the bottles aren’t in use, because they dry out easily.

The line drawings dry really quickly. Usually I’ll draw on five to six pots, then start coloring in my drawings (figure 7). For the painting stage, I find it easier to pour my underglazes into a plastic ice tray, preferably one with a lot of compartments. The empty compartments are good for mixing underglaze colors together.

**Drawing Inspiration**

My drawings aren’t planned out beforehand; I tend to work more intuitively, looking at the space and seeing how I want to divide it up. I’ve spent the last two years trying to find the right balance between too little and too much decoration.

My drawings are mostly inspired by the idea of connection. I have moved a lot over the past several years and being in a residency situation involves a lot of people moving in and out of your life. Some of these connections have stayed very strong despite the distances. My drawings often occur in groupings of two to three similar elements, dotted lines sometimes connect these elements, creating lines of communication.

I’m also intrigued by the new connections that are formed when a pot leaves my studio to become a part of somebody else’s life. I find this to be one of the most interesting aspects of being an object maker. Using pots made by friends who are far away really does help me to feel connected to them. It’s a really nice part of being a potter.

Courtney Murphy is a full-time potter, currently finishing up a two-year residency at the Archie Bray Foundation for the Ceramic Arts in Helena, Montana. To see more of her work, visit her website at www.courtneymurphy.net or her Etsy store at www.courtneymurphy.etsy.com.

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**Recipes**

**Mel’s Fantastic Sig**

1. Blunge Darvan into water.
2. Slowly add clay to water and blunge for about 3–5 minutes.
3. Ball mill for 12–24 hours (no longer or shorter).
4. Pour into clear container, let sit for 12–18 hours.
5. Either siphon out middle layer, or just pour off the top 2 layers. The top layer of water should be minimal so its not usually worth siphoning.
6. Simmer gently on the stove, stirring constantly, until the mixture reduces itself to about ⅔ its original volume. If a skin forms on the surface while you’re simmering it, just mix it back in. Save all chunks of clay.
7. When the sig cools, use a brush to re-integrate all the chunks and the liquid sig. There should be a slight sheen on the surface and the material should brush smoothly onto bone-dry pots.

*Note: I realize this is a more elaborate sig recipe than others you might have seen. I’ve tried simpler recipes, but had a lot of problems with flaking or weird textures. Finally my friend Mel Griffin gave me this recipe and it’s worked really well.

**PB Matte Majolica**

<table>
<thead>
<tr>
<th>Cone 05–01</th>
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<tr>
<td>Dolomite ..................... 10 %</td>
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<tr>
<td>Ferro Frit 3124 ................. 65</td>
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<tr>
<td>EPK Kaolin. ...................... 20</td>
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<tr>
<td>Silica Kaolin. ................... 5</td>
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<td><strong>100 %</strong></td>
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Add: Zircopax. ............. 10 %

*Note: Although this glaze was formulated to be a satin matte at cone 05, I have been firing it to cone 01. To tint the glaze I add between 1–6 percent Mason stain.
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Paying attention to the visual beginning and ending at the foot and the lip of a pot is a fundamental necessity to the success of the overall form. This may include adding transitions that separate the foot from the body, leaving a little heft, and/or creating a linear element at the lip of a pot that provide a resting place for the viewer’s eyes. These formal qualities help define the visual elements of a piece as well as provide a physical stability to the overall form. But how does this visual information translate when using flat slabs?

Deciding the right thickness of a slab in relation to the overall size of the form can be problematic. When making smaller functional forms, the slabs can be either thick or thin, because even small hefty forms can be easily lifted. With larger functional forms, it’s a different story. If a larger form is too thick, it may weigh too much for reasonable use, and if it’s too thin, it may seem too fragile.

Keeping the limitations of weight (and therefore of thickness) in mind, constructing a sizeable and trustworthy functional form that incorporates distinctive visual elements can still be done in many ways. The solution I use combines slabs of uniform thickness and the constructional integrity of clay to create a visually substantial, hollow-rimmed form.

Gather Support

A slump mold provides a stable form a slab can conform to while firming up. Whether the mold is made of bisqued clay or plaster with either a flat or curved bottom, it allows a form to be safely moved around the studio. For the forms shown here, I used a bisque slump mold made from an unaltered, wheel-thrown form (figure 1). Both bisque and plaster molds draw moisture out of a slab, so monitoring the consistency of the clay is very important.

Place a slab onto a cut section of a cotton sheet, trim the slab to size, then use the sheet as a support to lift it up and place it into the mold. The sheet remains between the clay.
and the mold as a separator, making it easier to remove the piece later.

**Inventing the Interior Shape**

At this point, the overall shape of the piece may take on innumerable characteristics. Is it curvilinear or geometric? Will the walls be even in height or undulating? Will the width of the hollow rim be the same throughout or will there be a wider section? Once you settle on an overall shape, draw the location of the interior wall with a scoring tool and apply slip in the scored grooves (*figure 2*).

Using a metal ruler (as a template) and a fettling knife, cut strips of clay to make up the interior wall. Being careful not to bend or fold the strips, score and slip the bottom and sides of the wall and firmly attach them to the form. Reinforce the connections with a thin coil (*figure 3*). Cover the form and the mold with plastic and let it sit overnight so the moisture evens out. The next day, the form and interior wall should be approaching the leather-hard stage. Determine the location of the outer wall, draw the outline onto the form and trim away any excess clay. Then, shape the outer edge, score and slip each edge in preparation for the final slab (*figure 4*).

Whenever I decide on a curvilinear form, I typically also decide for the rim area to reflect this and create a rounded edge on the piece. To do this, use a large dowel and a soft rib to shape the flat slab strips around the dowel. Score and slip each side of the rounded clay strips, carefully attach them to the outer wall and then ease the strip over to the interior wall, making a firm connection. Use a pony roller and a small paddle to force these two connections together (*figure 5*), reinforce each connection with coils, and score the entire surface thoroughly (*figure 6*). Smooth the surface, first with a metal rib, then a medium hard rubber rib, and finally with a soft rubber rib, until all of the evidence of scoring has disappeared (*figure 7*). At this point, I cover the form and the bisque mold in plastic and let it sit a second night.

**Working on the Underside**

Taking the leather-hard form out of the mold and flipping it upside down onto foam, I am now ready to finish the bottom of the piece (*figure 8*). I first refine the texture left behind by the cotton sheet with a soft rubber rib to ensure its smoothness. **Note:** Canvas leaves a very particular texture that requires more pressure to smooth out
and pushing too hard during this stage can distort the form. The residual canvas texture has an unintentional effect to the glazed surface. A cotton sheet leaves a less pronounced texture that’s easier to remove with a rib.

I use a needle tool to poke a hole into the hollow section. After all the compression due to ribbing, rolling, paddling and shrinkage, you’ll undoubtedly hear a hiss as this releases pressure built up inside the form.

**Four-footed Form**

There are many different types of feet to experiment with when working with slabs. I use four understated feet made from small clay lugs that elevate the entire piece off the table, allowing me to glaze the entire form. The only unglazed part of this piece will be the four places where it sits on the kiln shelf.

Attach the clay lugs or similar feet in the location where they will best support the piece and smooth each one into the form (figure 9). Start smoothing with your finger, then with a metal rib, then with a medium hard rubber rib, then with a soft rubber rib, and lastly with a chamois cloth (figure 10). Let the piece dry slowly over the next three days.

When bisque firing these pieces, spread grog onto the shelf, and create four piles to the outside of the foot areas before placing the pieces. The grog allows the piece to shift and shrink during the firing without added stress, and, in the case of the piles, supports the piece during the firing. If the feet were not able to move freely and one snagged on the kiln shelf, a crack could form. If not supported, the form might sag.

**Glazing: More is More**

Embellishing the form’s surface with glaze provides a seemingly endless array of potential designs, patterns, divisions of visual space, and glaze interactions. When glazing pieces, I apply one glaze at a time and use wax to mask off any desired glaze patterns. If using petroleum-based wax, which flows nicely off the brush and dries firm, let it dry overnight after each application.

Use a pitcher to pour glaze over the entire form as evenly as possible. Let the glaze air dry completely before applying wax. For more complex patterns, I sometimes draw onto the delicate glazed surface with a pencil very lightly, then follow this line with the wax. When the wax is completely dry the next day, I take a wet sponge and wipe away the excess glaze not covered by the wax. The strength of petroleum-based wax is an asset when wiping with a sponge. Paraffin wax and water-based liquid waxes do not seem to stand up. Also, waxed edges can...
be carved away with a fettling knife to neaten the line quality if necessary (figure 11). This process repeats with each glaze, so they’re positioned side by side. The combinations are based on anticipation of the eutectic formed where the glazes meet and melt (figure 12). When the last glaze is applied, the only steps left are to make sure to wipe any glaze beads that remain on the waxed areas and wipe any glaze from the feet.

**Firing**

I fire these forms directly on a very flat kiln shelf and let any deformation aid the overall form’s ability to sit flat on a table without rocking back and forth. If a piece is not level, I simply sand down one of the feet with a palm sander until it sits properly on all fours.

When making larger pieces, considering the form’s visual weight becomes very important. Making hollow sections provides a substantial looking rim and wall that weighs much less than it would if it was solid. The extra surface area offers a clear visual separation between the inside and the outside of the vessel and presents a voluminous area to explore innumerable decorative techniques and qualities.

*Mark Cole is an assistant professor in the ceramics department at the University of Nebraska-Lincoln. To see more of his work, visit www.markcolepottery.com.*

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Hollow lipped serving dish; 14 in. (36 cm) in length; reduction-fired stoneware, 2008.
I’m always experimenting with decorative techniques to use on freshly thrown bowls. One idea I’ve been working on is a pierced design for fruit bowls. I prefer more symmetrical patterns and, while designing the bowls, found I needed a way to accurately divide the bowl into sections and transfer my pattern onto the clay surface. The solution was to use various paper patterns that, when placed together created a unified design similar to a seamstress’ dressmaking techniques.

Start Off Right
Some bowl shapes work better for this technique than others. Bowl shapes with a wide base, a rim that only subtly flares and a belly that does not extend too far beyond the perimeter of the base work best.

Let the bowl dry only long enough so that it is no longer sticky to the touch. This prevents problems later when you’re working on the rim, as it starts to dry out before the rest of the bowl making it very vulnerable to cracking. If the bowl gets too dry before completing all the piercing and carving, the chances for cracking increase. Once the rim of a bowl cracks, you might as well reclaim the clay and start over.

Design a Fitting Pattern
Since the sizes and shapes of each thrown bowl varies, the sizes of your paper patterns will need to be altered. Four patterns were used to make the interlocking basket-weave pattern on the bowl demonstrated here (figure 1). The size of the bowl dictates the size of the first pattern piece, and the measurements of the second two patterns depend on the first. For a fruit bowl that’s 6 inches tall, 12 inches wide, and has a base size of 4 inches across, the following pattern instructions worked well. When designing for other sizes, use a photocopier to enlarge or reduce a particular pattern. I chose to keep my pierced areas ¾ of an inch apart. Alter these instructions as needed if you want a thicker line. Note: The pencil lines traced into the clay

Carving patterns use techniques similar to sewing. Various results occur when applied to different sizes and shapes.

Example of the pattern pieces that I used for the bowl demonstrated in this article. These patterns can be adjusted up or down depending on the size of the bowl and the size of the bowl’s base.
in the images shown here are heavier than what I would normally make so that they would show up better when photographed. When tracing pattern pieces, make sure that your traced lines are very light so you can erase any unnecessary lines later.

- **Pattern Piece #1—Scalloped Circle**

  The first pattern you need to make is circular with inverted scallops around the rim. It fits into the very center of the bowl’s basin and is approximately as wide as the bowl’s base. Fold a piece of paper like you would if you were making cut snowflakes for the holidays. To do this, fold the paper in half. Fold the paper again two more times so that the center of the folds forms a nice tight point. Measure the diameter of the interior base of the bowl, then divide in half. Mark the folded paper with this measurement (starting at the point and measuring up from there). This is your cut line. At this line, draw an inverted semicircle from one side of the folds to the other, then cut along the curve. Once cut and opened, you have an inverted scalloped edge circle. Lay the pattern against the very center of your bowl and gently flatten it against the clay. Double check that it is as wide as the bowl’s base, then with a dull pencil, trace the circle lightly into the wet clay (figure 2).

- **Pattern Piece #2—Oval Doughnut**

  The second pattern is an oval doughnut shape that fits the inverted scallops on the first pattern. To make this, first sketch, then divide a rectangle that acts as the bounding box for drawing the oval.

  For the width of the rectangle, measure the distance from scallop to scallop on the first pattern piece. On a separate sheet of paper, draw a line of that length, then add 1 ¾ inches to the end of the line. This allows for space to create the curved sides of the oval that extend beyond the scallop, as well as the ¾ in. space between the two intersections at the sides of the oval. The length of this line forms the top and bottom of the rectangle.

  Next, decide how tall the rectangle will be. The height of the rectangle is a personal preference. After many failures, I have learned that for bowls approximately 6 inches tall, making the rectangle pattern piece a height of 3 ½ inches works well. I adjust this height as needed for different sized bowls. **Note:** make sure that once all the pattern pieces have been traced that you have a wide enough rim to avoid the chance of cracking. Draw the top of the rectangle at this height, then add the sides.

  Now create the horizontal curves of the oval. First, find the center of the rectangle’s horizontal lines and mark this distance on both of these sides. Then find the center of the scalloped edge of your first pattern piece. Match the center mark of the scallop to the center mark of the first horizontal line of the rectangle (figure 3).

  Trace the scallop as shown in the photo. Repeat this process for the top of the rectangle so that the scalloped edges face each other and form the oval’s long curves.
The sides of the oval pattern are not traced onto your bowl so an exact measurement for them isn’t necessary, but I still recommend drawing the complete oval in order to make accurate tracings. To do this, mark the mid point of both sides. Then draw the narrower curve of the oval. Repeat this on the opposite side of the rectangle (*figure 4*). Now the oval you just created should fit nicely inside the scalloped edge of pattern piece #1.

Once the pattern is the desired size, cut out the center to make a doughnut shape. Measure ⅓ of an inch down from the outer edge of the pattern and cut away the inside portion.

Place the oval into the bowl so that it’s longer curve fits into one of the scalloped edges of the first pattern. As you lay the rest of the pattern against the rounded wall of the bowl, you may find that you need to make a folded dart on each side of the oval shape in order to make it lay flat for tracing. Once you have the pattern correctly in place, take a pencil and mark exactly where the two scallop corners meet the oval pattern (*figure 5*). In this way, you can easily register the pattern to each scallop using these marks. Trace only the very upper edges of the pattern and the lower inner edge of the pattern.

**Pattern Piece #3—Almond Doughnut Shape**

Each of the traced circles intersect along the upper edges, directly over top of the 8 scallop points of the first pattern. Next, create an almond-shaped pattern piece to fit in between these upper and lower intersections. The pattern helps create the illusion of the ovals overlapping one another and creates a place for registering the fourth pattern. In this example, the height of this almond shape is almost 3 inches tall (the distance between the upper and lower intersections). The width is ⅞ inch (for the width of the lines between pierced areas) + ¼ inch (for the center) + ⅜ inch, or 1 ¾ inches across. Mark the height and width on a sheet of paper and connect the dots to form the almond shape. To make it into a doughnut, cut out the very center, measuring ⅛ inch wide and ⅜ inches tall.

Place the pattern piece between each set of intersecting points around the bowl making sure to match the points of the almond pattern to the corresponding junctions and trace lightly (*figure 6*).

**Pattern Piece #4—Large Half Circle Doughnut Shape**

*Figure 7* shows an example of the large half-circle doughnut shape (cut in two) and how it fits in relationship to the other patterns. To figure out the size, take the measurement from the two arrows in the photo—the first arrow points to the inside bottom point of the traced almond shape and the second arrow shows the inner corner point where the two ovals intersect. Measure that distance. To make an accurate measurement, use a piece of string and lay it down from the first point to the other. Measure the string. The space you measured is ⅛ of the larger circle, so multiply that number by 8 to get the circle’s circumference. Use the equation D=C/π to
find the diameter, then divide this number in half to get the radius. Adjust a compass to this radius then draw the circle on a piece of paper. Cut it out, fold the paper in half, then cut along the fold line to get a half circle.

To make the half circle into a doughnut, measure ¾ inch inward from the pattern edge, adjust the compass to this radius, draw the smaller circle, then cut along this line. To make the pattern easier to work with, cut the half circle in two. Position one half so that the bottom corner of the pattern fits directly along the vertical axis inside the traced almond doughnut. It will extend outward and upward and should lay with its edge just brushing the almond shape next to it. The remainder of the arm extends beyond the traced oval shape (figure 7). Remember to leave at least ¾ inch to an inch of the bowl’s rim untouched to avoid cracking. Turn this pattern over and trace it on the other side of the same almond doughnut slot so that you form a large half circle. Lightly trace this shape all the way around the wall of the bowl (figure 8). When finished, there will be 8 complete half circles.

Next, decide where your final lines will intersect with one another. Make sure all your lines are the same width and the intersections match up. To create the illusion that the circles weave in and out of one another, erase various lines on your bowl as shown in the diagram (figure 9). To erase any unnecessary lines along the wall of the bowl, dip your finger in water and gently rub across the faint trace line you made. Use a wet paint brush and gently wipe over any finger prints to erase them.

**Piercing and Carving the Bowl**

When the clay is no longer sticky, you can begin to make your cuts. Carve from the top to the bottom of the bowl as the top will begin to dry faster than the bottom. Beginning with a needle tool held at a 90° angle to the clay, cut out the negative shapes around your woven pattern. Don’t worry about burrs left from the cut as you can clean them up using a beveled-edge cutting tool when the clay firms up. I also use this tool to carve the rest of the lines. When you finish the carving, dip a pointed paint brush into water and gently rub it along the inside edge of each cut to smooth the edges (figure 10).

To finish the piece, carve the outside of the piece to mirror the inside of the bowl. Reverse the pattern so that if one line on the inside of the bowl follows an “over, under, over, under” pattern, that same line on the outside of the bowl does the opposite. In this way, the wall doesn’t become too thin from carving on both sides thus risking cracking or breaking. When the piece is leather hard, carefully turn it over and trim the bottom.

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Glaze Books: Colour in Glazes and Maiolica

by Sumi von Dassow

Learning to make pots is only half the battle in pottery—and may be the easier half. Unless you want white pots, you have to decide how you’re going to get color on them. There are three basic options; color under a glaze, in the form of colored clay, slip, or under-glaze; color in a glaze; and color applied on top of a glaze. Most potters use colored glazes; however, maiolica, in which the color is applied on top an opaque white glaze, is popular among studio potters, particularly those with limited space for glaze buckets. Two useful new books focus on sources of color in glaze and maiolica.

Colour in Glazes starts out with very technical explanations about glaze chemistry, but not to worry, it gets easier to understand as you continue to read. After you mine the recipes, go back to chapter one to better understand the differences between the glazes. You can get a lot more out of it if you learn what makes the color work in each recipe and how to adjust recipes as needed. The book offers suggestions on adjusting glazes to fire at different temperatures and if you’re not used to mixing your own glazes, chapter six tells you how. Chapter seven teaches you how to apply glazes while chapter eight guides you through testing your new glazes.

If you already have a slew of glaze books, this one is shorter and more concise than some of those old books, and it includes information and recipes about rare earth oxides—comparing the colors they produce to the colors you are familiar with in standard colorants. There are also useful appendices including UK to US materials conversion charts, a list of commercial stains and oxide combinations, and a supplier list to get you started.

Once you’ve read Colour in Glazes you’ll know which oxides make what color, and then you’ll be prepared to read Daphne Carnegy’s Maiolica. Maiolica involves painting coloring oxides on top of a white glaze with a result similar to watercolor painting. It sounds simple, and it is, essentially, though the devil is in the details. If you’ve tried painting oxides over your usual white glaze, you know what I mean. It doesn’t automatically work. As you’ll learn from this book, to make the coloring oxides melt into the glaze surface, you need to mix them with a melting agent such as Gerstley borate or a frit. To make this combination flow off your brush smoothly, you’ll need to add CMC gum or something similar. Of course, having the right brush is key, and this book guides you in selecting appropriate brushes.

Maiolica is traditionally done at earthenware temperatures (cone 05 to cone 1) on red clay. If you want an authentic maiolica effect, you probably want to work within this range. This book offers many glaze recipes, lots of oxide mixtures, and plenty of ideas for trying glaze recipes at stoneware temperatures. I think my cone 6 white glaze might work after all, now that I know what to mix with the oxides. And there is a lot more to do than just brush oxides over white glaze—including maiolica over black glaze, using wax resist, sgraffito, stencils, “cuerda seca” (stain mixed with wax), decals, lusters, and enamels for further decorative effects. This book is very useful if you are interested in achieving painterly effects on clay. Maiolica can be used for everything from the traditional figurative imagery to abstract designs and patterns, so don’t be scared away just because you think you can’t draw!
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