

Marbling Turnings

Fluid, Mesmerizing and Spontaneous Mary-Celine Thouin

Woodturning and marbling are ancient art forms that are both taking on new faces. If someone asked me if these two crafts share anything else in common, I would answer "most definitely!" I started turning in 1974 and marbling in 1992. What captivated me with woodturning 27 years ago is the same essence that drew me to marbling. Their similarities? I view them both to be very "fluid" art forms - both are meditative, mesmerizing, and spontaneous.

A simple definition of marbling is that it is the art of floating paints on a thickened liquid or water, patterning a design, and making a contact print. A variety of paints and liquids or "sizes" can be used. In this article, I'll focus only on my materials and methods using acrylic paints and a size of water thickened with carageenan, which is derived from seaweed.

Marbling is a beautiful, fascinating, and surprisingly complex craft. It is a balance and a blending of the marbler - and the process of marbling. You never quite know just who is in charge - you - or the marbling! If you can let yourself fall into and flow with its magic, you will be well rewarded. There is no concrete set of rules to insure success, only guidelines. Any long-time marbler will tell you "what works for one person may not work for another - and what works one day, may not work the next." A marbler recently wrote to me, "Sometimes marbling is like trying to rein in wild horses - you may end up somewhere, but the trip wasn't what you had planned on!" Hang on to your



Marbling isn't just for bowls and platters like the ones on the cover of the Journal, as you can see from the vase above and the photos on the following pages. Photos by Dave Grondin.

was a natural progression for me to attempt marbling my woodturnings. I quickly found that marbling on wood had its own additional set of peculiarities. I also realized that there was minimal information on wood marbling, which required me to pioneer my own way. That was fine with me, as I have always seemed to find directions in life that challenge me. So, I dove in and learned from the school of experimentation and self teaching. I will always be learning and I hope improving my skills and techniques. I don't have all the answers - I am happy to help others get started.

Getting Started

Even if you are only interested in marbling wood, I can't emphasize enough the value of first becoming proficient in marbling paper. There are good reasons for this.

A sheet of paper costing a few cents gives freedom to learn and experiment. It's easier to discard 50 sheets of marbled paper than to discard or strip marbling on 50 woodturned bowls! Your first trial sheets will help you sort out the peculiarities of paint chemistry, bath consistency, humidity etc. And, more important, these practice sheets help you begin to learn essential basics and to gain confidence and competence in controlling patterns, color, and color balance.

After marbling your first 100 sheets or so of paper you'll be astounded at what there is to learn in this rich craft - and number 100 will be startlingly more beautiful than number one. (Caution: marbling paper can be addictive, you might forget your original intention!)

Successfully marbling a three-dimensional object is much more complex than marbling paper. You must anticipate the way paints stretch and distort their patterns, and the way they thin out as a 3-D piece is lowered into it. Other aspects unique to wood marbling are trapped air, wood as a background, and finishes appropriate for wood, which I'll discuss later.

Setting Up

A fair bit of prep and set up is needed, so start a day ahead of

hats folks - it's quite an adventure!

As I worked with my husband, who was teaching himself to marble papers, it

time. It wouldn't hurt to warn other household members that you will be taking over the entire room or kitchen and all available horizontal surfaces! (And perhaps some vertical ones.) Some marbling techniques splatter fine drops of paint, so unless you want to

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The author spreads colors on the bath of size, then manipulates the patterns until she has something that pleases her. The turned vase is dipped into the color pattern, as shown. A dowel, hot-melt glued to the bottom of the turning is used to immerse the piece into the pattern.

change your decor to "Speckles," protecting surfaces is recommended. And perhaps scheduling 'a dinner out' may win you a few points, as well.

Basic Necessary Supplies

Size: The size is a thickened "bath" that supports the floating paints. The two main choices for size are: carageenan or methyl cellulose. I prefer carageenan, an extract of a seaweed called Irish moss. Buy carageenan that is made for

- it is aluminum based and is readily absorbed through the skin, as well as being cumulative in the body.

Paints: I use acrylics for both paper and wood marbling. Because they are especially opaque, I feel the acrylic colors are particularly good for marbling on wood. I presently use the "Ceramcoat" brand of acrylics, or "fluid" acrylics made by Golden. Ceramcoat is a good choice for beginners, as it

of them. Because of this, many marblers use distilled water to make the size and to thin their paints.

Your own water may work well, but if you have problems, start again using distilled water. I understand that water from a water softening system can also cause problems.

Photo Flo 200: (Kodak) Paints need to be thinned in order to float on the size, and are first

marbling (non-food grade). Mixing is relatively easy - it is slowly blended into water.

Alum: Pieces that are to be marbled need to be alumed first, which is essential for the paint to stick to the item you are marbling. Use alum that is sold specifically for marbling - normally listed as aluminum sulfate. Be sure to wear rubber gloves when applying alum

is inexpensive and works well. Its disadvantage is that their paints sometimes have small flecks of contamination. The Golden paints are clean and have a nice clarity to them, but they cost more.

Distilled water: Water is used to mix the size and to thin the paints. There are a number of factors that can cause marbling failures. Water is one

thinned with distilled water. If that doesn't work, use a small amount of photo flo, (available from camera shops), along with the water. Usually just a small quantity is needed.

Paper: (for paper marbling): Ask the people at the art store to sell you what other local marblers use. A few paper choices are Classic Laid or Classic Linen 70 lb, charcoal and watercolor papers. You may have to experiment.

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Pans: I like white pans in order to best see the colors. For marbling paper, use a pan that's slightly larger than your paper and about 2-in. deep.

For marbling a whole turning, use a pan that's deep enough for the piece to be totally submerged, without the size overflowing. The pan should be at least double the diameter of the woodturning - so that, as it is being immersed, there will be enough room for the paint to be drawn in from the sides and cover the piece as you had intended. If you are marbling a rim of a woodturning only, then you will only need a pan a little larger in diameter than the piece itself.

Newspaper: This is used to clean or skim the surface of the size. The skin that forms on the surface after the size sits (even for a short time) must be removed before colors are applied. Newspaper is also used to clean off remaining colors after a print is made. Cut newspaper in strips or have some the same dimension as the marbling pan.

Patterning Tools: These are a stylus, rakes, or combs. A stylus is a single patterning tool such

ash, with bold grain that fight the delicate look of the marbling.

Masking: I use liquid frisket or liquid mask (used for masking watercolor paintings) to protect areas that I don't want marbled.

Holding stick: Attach a dowel to the bottom or the inside of the piece with hot-melt glue to hold the piece as it is being marbled.

Marbling in 3-D

The two important considerations when marbling any three-dimensional item involve both the aesthetics and mechanics of marbling the piece. First, consider the appropriateness of the materials. A woodturning should be made especially for marbling. I see no reason to take a woodturned piece that has beautiful or striking grain and marble over that natural beauty. I turn forms and details that I feel will allow the woodturning and the marbling to compliment each other.

Second, before starting the

2.) Air pockets.

3.) The colors on the size rushing into the inside of a bowl through cavities and openings - thereby making a swirling mess of your carefully patterned paints. If you are wanting to marble both the inside and outside of an open bowl - you have to carefully immerse it from the side rather than from the bottom up, for the same reason. However, realize that the colors will be thinned out on the last side to be marbled.

4.) You generally do not want to roll the piece across the surface of the bath, because that will give a broken, hard edge where the pattern joins.

5.) Color stretching: Central to the difference between paper marbling and 3D marbling - is that when a 3 dimensional piece is immersed in the bath - it acts like a vortex. The marbling wraps up and around the piece -- gathering, pulling and stretching the colors. As the paint is being stretched, the color becomes diluted and loses its intensity. Take this into account when deciding

as a dowel or knitting needle. Rakes and combs can be made from a variety of materials, and are made in different sizes for various patterning techniques. Most marbling books have good instructions on how to make your own rakes and combs.

Paint Application: Eye droppers or small paint applicator bottles work well.

Supplies for Marbling Wood:

Wood: In choosing wood to marble, think like a painter - pick a species that provides a homogeneous background like a canvas for patterns and color.

Good choices are fine-grain hardwoods such as maple, birch, cherry, walnut. Poor choices include softwoods, like pine, that has resins which will resist the marbling. It's also more difficult to apply a finish evenly to softwoods. Also avoid Exotics which are usually too oily for good paint adhesion and coarse grained, large-pored woods, like oak and ash, with bold grain that fight the delicate look of the marbling.

Masking: I use liquid frisket or liquid mask (used for masking watercolor paintings) to protect areas that I don't want marbled.

marbling process you need to plan how the piece is going to be immersed in the bath in order to avoid things like:

1.) The shape of the piece not allowing the marbling to contact parts of the turning.

which way to immerse the piece, and also in matching the size of the woodturning with the size of the pan. Remember - the pan needs to be deep enough to immerse the entire piece, without the size flowing over the top of the pan.

KEYS TO SUCCESS

Cleanliness: Keep all containers, equipment and tools free of oils and soap residue, which can contaminate the bath and cause marbling failures and frustration.

Dust: Work in a minimal dust area - flecks of dust settling on the bath cause little areas not to print. This means no dust on your work, clothing, or you!

Humidity, temperature, quality of ingredients: High humidity and lower room temperatures are desirable for marbling. Generally speaking - a temperature below 60 is too cold (the colors don't spread well and sink) and above 80 is too warm (the colors can spread too much and don't hold their shape). I find that 68 or so works well for me. It is also important to keep your paints and the size as close to the same temperature as possible - this is even more important than room temperature. If the paints and size vary greatly in temperature, it can cause the paints to sink.

In order to insure that you are buying quality ingredients, my best recommendation is to buy your supplies from a good art store or marbling supplier.



The marbling for this piece, begins with applying colors on the thickened size and allowing them to spread, above, then manipulating the colors with a stylus. After creating a small indentation on one side of the circle, below left, the author makes a contrasting figure on the other side, below right. The variety of colors and patterns that can be used is almost limitless. The author recommends you experiment by marbling paper and trying some of the patterns demonstrated in the books she recommends on the following page.



Wood Preparation:

After turning a piece, I sand it to 400 grit - then I wet it to raise the grain, let it dry, and re-sand it using 600 grit. Re-sanding the raised grain eliminates problems such as tiny air pockets or bubbles that would show up on the finished piece as little unprinted circles.

If you want to protect any areas from paint, now is the time to mask them off with the liquid frisket and let it dry. The piece is now ready to be alumed. Before you alum it however,

it works well to attach some sort of "holding stick" to the piece. Decide which way the piece will be immersed in the bath and hot glue a heavy dowel onto the piece where there will be no marbling.

The piece is now - FINALLY!! - ready to marble!

Mixing Alum and Carageenan:

Carageenan: I use two tablespoons carageenan to each gallon of water. Carageenan must be mixed in a blender or a food processor. Put a portion (about 1/3 of the blender) of the water into the blender, start the

machine on slow speed and then slowly start adding a portion of the carageenan until mixed. Pour mixture into the marbling pan. Repeat this until you have used up the measured amount of carageenan. You can then add any extra water to the mix: there's no need to run a gallon or more of water through your blender. The carageenan size should be about the consistency of cream. Allow the size to stand 12 hours before marbling in order to "cure." Keep the size covered to keep out dust.

Alum: I use a weaker alum solution for wood than for paper. For paper marbling, I use four table-

spoons alum to 4 cups water. I heat the water to dissolve the alum, then let this cool before applying. Alum solution may be brushed on - a foam brush works well. Allow the paper to dry under a press to keep it flat.

For wood, I use 1/4 CUP of alum to 1/2 gal. of water. I mix enough alum so I can dip the marbled piece. Allow the alum solution to dry on the piece before marbling.

The Marbling Process:

At this point your size is mixed, cured and in a pan. Your paper or your woodturned piece has been alumed and is ready to be marbled.

Preparing and Applying Paints:

Paints generally must be thinned to the consistency of milk or light cream. Thin them, initially, with distilled water. Test each color to see how it reacts on the size. Sometimes a particular paint will still sink when applied to the bath, even though it

READING LIST

Here are several marbling books that I know of:

Marbling Techniques by Wendy Addison Medeiros

Marbling - A Complete Guide to Creating Beautiful Patterned Papers and Fabrics by Diane Vogel Maurer with Paul Maurer

Marbling Paper and Fabric by Carol Taylor

The Art of Marbled Paper by Einen Miura

Marbled Designs by Patty and Mimi Schleicher

has already been thinned with distilled water. If that happens, that is when I add a little photo flo.

Individual paints and colors react differently, so you must learn to work with the individual nature of each color, in order to get the colors to spread evenly. The object is to have the paints float on the size and spread evenly into a circle without the color sinking, or spreading out of control. Some colors float and spread at a reasonable rate, others sink more readily, and others spread so wildly that they can ruin the pattern you are working on. The colors that push wildly, I refer to as "hot" colors. The colors that do not spread well, I refer to as "cold."

Colors that were a little on the "cold" side may need to have additional dispersant (photo flo) added to them in order for them to be able to push against the colors that are there. This is presuming that distilled water was used and is still not doing the job. Be careful in using "hot" colors. There are some that are always difficult to control - when I get to know which ones they are - my method of controlling them is to control drop size by using a smaller applicator for a smaller amount of paint.

If photo flo is needed, I have different mixes I use. I have a jar mixed 1:10, 1:25, 1:50 (photo flo: distilled water). Begin by using a drop or two of the weakest solution in the needed paint . Increase the amount and strength as necessary.

Applicators: Whisks, eye droppers and dropper bottles are three choices to apply the

already there. In so doing, the strength of each color changes as well. The colors that were applied first, will be the most condensed and the boldest colors - the paints that are applied last will be a lighter shade.

Patterning:

In learning to predict and control patterning, you are developing a "working vocabulary" of the craft - while at the same time - learning about color, color balance and harmony. These skills are integral in producing quality marbled pieces.

Printing the Piece: Once you have applied colors and developed a pattern that you like, you then take the piece, with the holding stick attached, and immerse it onto the paints and into the bath. After the piece is fully immersed and printed - you slowly pull it out of the bath. As it's being pulled back out of the bath - it will have a slurry of extra color and carageenan on the piece. Do not worry about this - bring it over to the sink and with the least amount of tepid water coming out of the faucet as possible - slowly and carefully let the water wash off the carageenan - leaving the printed pattern. The marbling is quite vulnerable at this stage, as your hands rubbing on the wet marbling can easily smear or wash off the marbling. After rinsing, set aside to dry.

This is the moment you have been waiting for - the grand finale!! Hopefully your labor of love will be breathtaking.

In my next article we will talk about dyeing your work to create a background color, critiquing your work and finishing. Meanwhile work on those 100 pieces of paper and try out a few turnings.

Mary Thouin lives in Leonard, MN and demonstrated marbling at the AAW Symposium in St. Paul, MN.

Traditional Marbling by Iris Nevins

Marbling. Easy and Elegant Projects for Paper and Fabric by Laura Sims

Any of these books should help you learn more about the topics and techniques discussed in this article. - M. T-S

paint. Whisks are used to make a "stone" pattern. Eye droppers or bottles are used to apply paint in circles - usually concentric - but sometimes individually.

It is important to be gentle when applying paints - just touch the surface of the bath. If using a whisk, use a light hand. As the paints are applied and begin to spread, they will also push and condense the colors that are

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FINISHING TOUCHES

Critiquing and Finishing Marbled Turnings

In the Fall 2002 American Woodturner, Mary Thouin presented techniques for marbling turned wood. In this article she presents some of the fine points for dyeing your work to create a background color, critiquing your work and finishing.

Adding a background color

I like to pre-color woodturnings before I marble them. This gives a background color to the marbling, which de-emphasizes the visual effects of the woodgrain, which I feel fights the marbling, even with light colored woods. This is simply an aesthetic choice.

The time to apply the dye is after you have sanded the turned piece to 400 grit, wet it, let it dry before resanding using 600 grit. Wetting the piece raises the grain, and re-sanding this raised grain eliminates problems such as tiny air pockets or bubbles that could show up on the finished piece.

I use either FW acrylic inks or Procion or Pro MX fabric Dyes, which are available at various art stores and craft supply houses. Each product has advantages and disadvantages as listed below.

Fabric dyes: need to be mixed with water and alcohol. You can mix a large enough quantity that the piece can be dipped. This makes coloring the piece quick and easy, and relatively inexpensive. The down side of dyes is that some of the colors bleed into the bath when the piece is marbled. I found that dipping the piece in a dye fixative before marbling greatly helps this problem, but does not eliminate it completely. I also have had some of the dyes pull through the completed marbling when a finish was applied.

FW acrylic inks: I like these colors for pre-dying the wood. They are somewhat expensive, however, so it is not reasonable to mix up a big batch of color for dipping. This means the color needs to be painted on, because you don't want to leave "lap lines." Their



Red/Gold - 3-in.-high vase by the author. All photos by the author, except where noted.

you decide you don't like it after it's dry, lacquer thinner will remove it. If you use lacquer thinner, be sure to wear protective gloves (ones that are for solvents). After using the thinner, wash the turning with very dilute soap, and rinse the piece very thoroughly. Any residues will cause havoc in your marbling bath later.

There is a delicate balance between developing a skill base - and creative exploration. As with any art or craft, the more practiced a person becomes, the better he or she is able to identify guidelines that indicate quality work. Think about some of the qualities that we, as woodturners, feel are some



piece.

"Blue Sky" - 5" high blue vase by the author.

advantage is that once they are dry, they do not bleed into the bath and seem to be stable when finishing.

Critiquing your work

I carefully think about and examine the quality of the marbling before I put a finish on the piece.

If I am less than happy with the marbling, I wash or strip it off and start over. There are pieces I have even re-marbled up to five times. The marbling can be washed off under the faucet while the color is still wet, or if

basics for quality work. Marbling, though more subtle, is no different.

Some of the areas that I use when critiquing my own work are: color balance and harmony, clear line definition, lack of smudges, smears, and hesitation lines, dust holes. I strive for unbroken patterns and patterns that flow with the form of the piece.

I also posted this question to a marblers forum and these are some additional thoughts that Laura Sims,

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a professional marbler and instructor at Arrowmont School of Arts and Crafts in Gatlinburg TN, wrote:

"There seem to be two main components to consider when marbling: technical skill and the relationship of image to application.

"Some of the things I look for in the technical category are high line quality, balanced concentrations of paint, manipulation of a pattern or design (ex. is the image clear or muddy) and use of color (ex. compatibility, effective contrast). Another aspect of technical skill is being able to choose between 'following the rules' or 'breaking the rules.' Sometimes I compress veins of color until they break into beads. That would not be technically or visually desirable for a fine-combed pattern, but can be an effective 'design element' for bold patterns,



"The Rare Marble-backed Beetle Box" The beetle body.- is turned and carved. Marbling and turning by the author and carving by Graeme Priddle of New Zealand. Other collaborators on the piece done at the 2002- Emma Lake in Canada were Greg Wilbur (OR) and Chelsey Kingsely (NY). Photo by Neil Devitt.

grain and the marbled print, as

lacquer. I have found that many of the solvent-based finishes cause the dye or the acrylic ink to bleed through the marbling pattern, which diminishes the colors. Deft spray lacquer is one solvent based finish that seems to keep the integrity of the marbling. It gives a very nice clear finish, but is difficult to apply evenly. Multiple coats are needed and in order to achieve a smooth finish, a few thin (two-to-four) coats need to be applied. Then VERY CAREFULLY and LIGHTLY "rub out" the surface until it's smooth. It is very easy to sand through the lacquer and into the marbled pattern. Once this happens, I feel it is virtually irreparable. I sand with an ultra-fine cloth abrasive sold by Rio Grande (7500 Bluewater Road NW, Albuquerque, NM 87121 800-545-6566) called "Wet or Dry Tri-M-Ite Polishing Paper " made by 3M. It is excellent for rubbing out finishes.

creating the illusion of seed beads sewn on the marbled surface.

"That example leads to the second consideration. As a rule the relationship between the object and the chosen image will be compatible.

The design will enhance the object and visa versa. With working in wood you are already moving toward a heightened awareness of pattern, form, composition. That continues to evolve. Even if you can't verbalize why something works, sometimes you'll find that your heart beats faster, maybe you can't stop looking at it, or someone will see it and it'll stop them in their tracks. The marbled woodturned objects that I have most liked have had a tangible relationship between the form, wood

if they needed one another to show off their best qualities. My favorite definition for art is: 'Technical skill often as though aided by magic' (Websters New International, 3rd edition.)"

Finishing marbled surfaces

The fragility of marbled paints on wood necessitates a protective coating - and finishing marbled pieces can be tricky. You want a finish that is clear in order to not yellow the marbling colors - do not use oil finishes for this reason. The best finishes I have found to date are either water based artist varnishes, interior water based (aqua) urethane, or Deft spray

For a more natural looking finish, I thin water-based varnishes about 50/50 with water, then paint on one or two very thin coats, using a quality brush.

In closing - If you have read both of my articles, then you must be serious! Hopefully, they will help you dive head first into this fascinating craft - so go have too much fun, experience the magic! - (and don't forget the dinner reservation!)

Mary Thouin demonstrated marbling at the AAW Symposium in St. Paul, MN. To see marbling, check her web site www.mceline-artisan.com

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