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# LAPIDARY JOURNAL JEWELRY ARTIST

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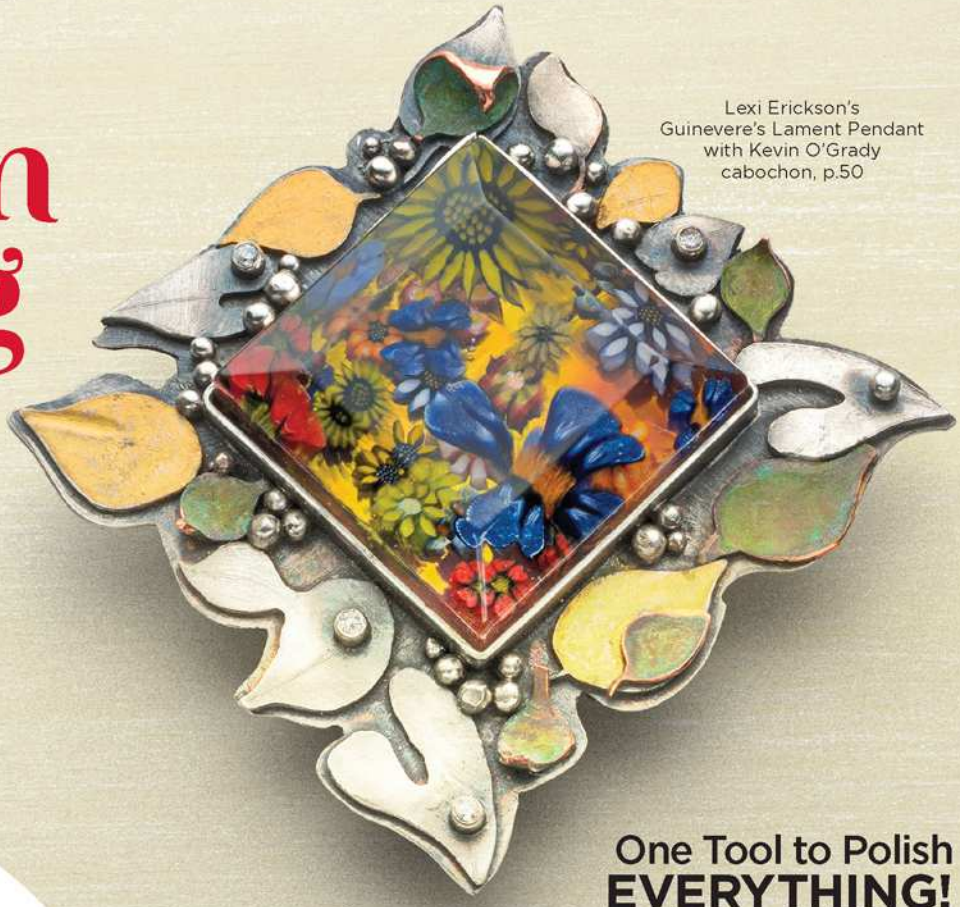

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May/June 2018 • Volume 72, Number 2



## *Design Aids*



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## Cognac Garnets



## 3D Color



## Past Lives

# To Gigs . . . and Martians?

"CONGRATS AND WELCOME to the gig economy!" I recently emailed a friend. She'd sent me word that she'd started freelancing after many years of full-time employment, and was happy with the setup so far.

That's what we used to call the gig economy, at least among writers, photographers, and other journalist types: freelancing. Maybe you think of it as being a studio artisan or working as a variable-time independent contractor for any kind of business. Being unattached to someone else's company means you have both the responsibility and freedom to figure out your own way of making your business work. As long as the bills get paid, you can produce what you want, when you want, wherever you want.

Tucking yourself into some out-the-way corner is not just a cozy idea. It's a cost-saving strategy, too, and often part of the appeal. Paying for living quarters and a workshop in the heart of a major city can quickly turn a business plan red, but whether you find it inspiring or stir-craze inducing, the countryside could offer you all the space you need.

If you do enjoy the isolation, excellent, because these days you need to leave it less and less. Online marketing and shopping provide vivid, multimedia presentations and door-to-door delivery of goods, from the tools and supplies you buy to the finished work you sell. What makes all this fly is Internet access with service that is reliable, affordable, fast, and capable of handling ever more data, especially on mobile devices. Yet the more remote you are, the less likely you are to have that kind of online experience.

Enter the satellite Internet — a proposed extraterrestrial network of bodies put into Earthly orbit for the purpose of astronomically improving our digital connectivity. The Federal Communications Commission (FCC) has already approved several such projects in development, including ones by OneWeb, Space Norway, and Telesat. As I write this, a fourth has just made headlines with its progress. With the February 22 launch of two prototype satellites and support from the FCC Chairman for its Starlink Constellation program, SpaceX is leading the way. Founder and CEO Elon Musk predicts that the first satellites will be operational by 2020 and the project completed by the middle of that decade.

Which is pretty ambitious in its own right, but Musk's vision looks beyond even that. He plans to use Starlink to fund exploration on Mars. So if you're out in the sticks hammering silver today, don't just gear up for expanded ecommerce on this planet: start thinking about serving the Martian market, too, and soon!

Merle White

**Merle.White@fwmedia.com**

LAPIDARY JOURNAL JEWELRY ARTIST

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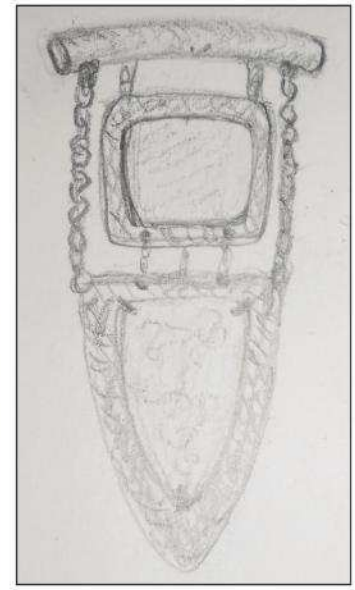
# Design Challenges

## *Your Design Riffs*

Designs based on projects and jewelry shown in the January/February 2018 issue of *Lapidary Journal Jewelry Artist*.

**Shevvy Baker**
**Louisville, Kentucky**
*Based on Lexi Erickson's Ode to Orkney Pendant*



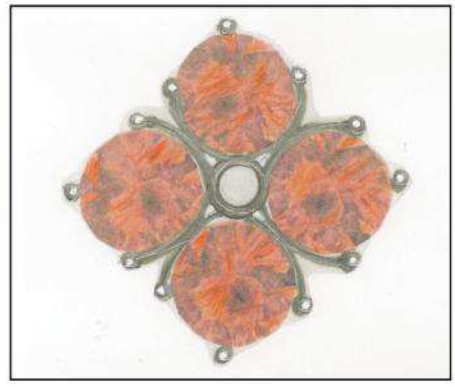
**Peggy Haupt**
**Gatlinburg, Tennessee**
*Based on Lexi Erickson's Ode to Orkney Pendant*

**Shevvy Baker**
**Louisville, Kentucky**
*Based on Sam Patania's Sparkling in 3D Earrings*

**Shevvy Baker**
**Louisville, Kentucky**
*Based on John F. Heusler's Ocean Voyage Pendant*

**Peggy Haupt**
**Gatlinburg, Tennessee**
*Based on Sandra Lupo's Sun Worship Duo Necklace*

# Your Settings



**Shevvy Baker**
**Louisville, Kentucky**
*Designs based on a Mexican fire opal, January/February 2017.*

# Letters


**Re: "Flush Setting Demystified," January/February 2018**

In the January/February issue of *Lapidary Journal Jewelry Artist*, you had a how-to article about flush setting. A great tip for burnishing the gem in is to make a burnisher specific to the task.

Easy! Take an old bur, remove the head and shape the end of the shaft to a round tip, polish it well, and mount into a graver handler. I have these in about 3 sizes appropriate to the size of the gem you are setting. After the gem is seated, place the round tip into the hole and pull "outward" with your hand and then push the tool around the seat, maintaining outward pressure all the while. Voila! A smooth even burnished setting without the awkwardness of trying to keep an even pressure using a tapered tip burnisher.

**Mark Clodius**
Rockford, Illinois


**Re: Ask the Experts, December 2017**

Just a clarification. The carpet tape you pictured is not the double sided tape mentioned in the tips, but hot melt tape. The hot melt tape has glue gun-like glue in ribbons with a paper backing to hold it together. The stripe down the center indicates the seam placement. In order to activate the glue, you would need a heat gun or iron. The iron would be extremely messy and a heat gun would melt the top and secure the piece, but it would not be secure it to anything underneath. The paper prevents that. Regular two sided tape is much less expensive and suitable for the use described.

**Dale Hanson**
Anchorage, Alaska

# Next Time

***Lexi Erickson's*** *Pendant in "Guinevere's Lament"*

***Arlene Mornick's*** *Earrings in "Quilling Reborn"*

***Roger Halas's*** *Bracelet in "Prehistoric Winner"*

Riff on the design of any of these or other pieces within this issue, using a design feature such as color, texture, form, value, line, space, repetition, balance, contrast, unity, or variety for your sketch. Please indicate which piece your entry is based on.

Sketch a setting for this hessonite garnet from Smokin' Stones, page 30.

**DEADLINES: JUNE 30, 2018**

Email digital scans at 300 DPI or send photocopies of no more than three sketches per challenge, indicating the design factor that is your starting point. Sketches will not be returned.

**WRITE TO US ANYTIME:**

What do you think about what you've seen and read in *Lapidary Journal Jewelry Artist?* SEND SKETCHES & LETTERS for possible print or online publication to: Karla.Rosenbusch@fwmedia.com. Please include your name, city, and state, and indicate "Your Turn" on the subject line.

# Their Turn

a gallery of this issue's contributors

## Michael Cheatham's

*Inlay Bracelet and Cross Pendant*

Stone on stone inlaid sterling silver bracelet with Kingman turquoise, sugilite, fossil walrus ivory, lapis lazuli; hand-fabricated and hammered sterling silver pendant

➔ **"GRAPH IT,"** p. 20

PHOTO: COURTESY MICHAEL CHEATHAM

## Roger Halas's

*Aquaman Wallet Chain*

Silicon bronze, brass, forged copper links

Made for the upcoming film, *Aquaman,* by Warner Bros. and DC Comics.

➔**"PREHISTORIC WINNER,"** p. 70

PHOTO: ROGER HALAS

## Noël Yovovich's

*Splat Bracelet*

Argentium® sterling silver

➔ **"HIDDEN CATCH,"** p. 32

PHOTO: JIM LAWSON

## Grant Robinson's

*Pendant*

Citrine, 18K gold

➔ **THEIR TOOLS,** p. 10
➔ **"IT'S ALL ON THE WRIST,"** p. 24

PHOTO: JIM LAWSON

## Lexi Erickson's

*"And the Day Came" Pendant*

Sterling silver, patinated copper

➔ **"GUINEVERE'S LAMENT,"** p. 48

PHOTO: COURTESY LEXI ERICKSON

## Arlene Mornick's

*Quilled Pendant*

Silver paper-type metal clay, pearl

➔ **"QUILLING REBORN,"** PAGE 58

PHOTO: JIM LAWSON

## Kieu Pham Gray's

*Pendant*

Kingman turquoise, pink tourmaline, sterling silver

➔ **"SUPPORTING STAR,"** p. 64

PHOTO: COURTESY KIEU PHAM GRAY

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## Their Tools

a contributor's favorite

*By Sharon Elaine Thompson*

# Working Under a Microscope

Grant Robinson's exquisite jewelry on an exquisitely small scale demands serious optical aid


AT ONE TIME, it was possible to get away with a piece of jewelry that looked good at arm's length. Today, with such advances as computer-aided design and the ability to see jewelry designs on a large screen, high-end jewelry customers expect more. The way to achieve that expected perfection is to examine your work — or even do the work itself — under higher magnification.

### Use a 'Scope to Improve:

- **fit of tiny moving and custom parts**
- **fit of stones**
- **quality of fine detailing and finishing**

### What to Look for in a 'Scope:

- **balance of magnification and working distance**
- **a stable stand that allows free range of motion**
- **a head small enough to be out of the way**
- **excellent lighting options**

This is especially true if you specialize, as jewelry artist Grant Robinson does, in work that requires tiny moving parts. Like many jewelers, Robinson wears an OptiVisor both as magnification and eye protection. But he ensures the high level of accuracy he demands from his work by verifying under a microscope that the fit and finish of a piece is uniform. A microscope is invaluable to Robinson when checking the fit of a stone or the quality of fine detailing, such as the milgraining at the edge of the end caps Robinson created in adding a hinge to a lapis bangle ("It's All on the Wrist," page 24) that needed to be uniform and flush with the edges.

In addition, Robinson makes all of his pieces so that they can be taken apart and repaired if they are damaged during wear. Instead of soldering pieces together, he uses a watchmaker's tap and die set to make screws as small as 0.25 millimeter to hold pieces in place. He works under the microscope to be sure the edges of the screws are rounded so that they seat properly, and that the head of the screw is cut accurately to fit the tip of the screwdriver.

When choosing a microscope, it is always a tradeoff between strength of magnification and working distance, the distance between your hands and the lens on the bottom of the scope. The greater the magnification, the shorter the working distance, explains Robinson, which means you have less room to do the jewelry operations you need to. A short working distance also means you risk spraying "gunk" onto the lens. As Robinson is also an associate professor of neurosurgery at Duke University, he uses a surgical dissection microscope, but there are a number of microscopes on the market today that are designed to aid in bench work.

Almost more important, says Robinson, is the microscope stand. It must allow free range of motion so you can put the scope wherever you need it. It must be secure enough to keep the scope from tipping. The head of the scope should also be small enough that it doesn't get in the way as you work.

And always be sure that the scope either comes with excellent lighting or that you can add it.

*Grant Robinson's hinged lapis bangle (project, page 24)*
PHOTO: JIM LAWSON


*Jeweler's microscopes and stands, including the Meiji EMZ-5 Microscope with Acrobat™ Stand and Ring Lamp (opposite page) and the Leica® A60 Microscope Kit with Acrobat™ Versa Stand (left).*

*Available at www.riogrande.com.*

**SHARON ELAINE THOMPSON** is a freelance writer based in Oregon. She has written for *Lapidary Journal Jewelry Artist* since 1987 and blogs frequently at www.interweave.com/jewelry. Learn more at www.jewelryartdiva.com

*By Cathleen McCarthy*

# Gimme Shelter

## How to find the best deals on the show circuit

FIRST QUESTION I ASK at a jewelry show is usually: "Can I see your new work?" The second: "Is it okay if I take a picture?" Finally, if I know you well: "Where are you staying?" I'm always looking to score a better deal and I know you are, too, because there's always next time.

I find designers who've been traveling the show circuit for a while are expert travel planners and most have a system in place.

### RENT A HOME

Many jewelry artists are fans of Airbnb, something I've used myself for everything from a couple nights in Manhattan to a week in the Virgin Islands. Since you're renting a private home from an individual, each Airbnb experience is unique. That can be part of the fun but it throws a bit of unpredictability into the process. My advice is to read the customer reviews carefully and think twice about renting from someone who hasn't accrued any.

"I've had really good Airbnb experiences overall and the reviews tend to be pretty accurate," says Niki Grandics of ENJI Studios. "But every experience has been different with the individual host, the city, the area."

On one of her first Airbnb experiences, she stayed at the San Francisco home of a fashion entrepreneur who had just sold her business. "She was really welcoming and we kind of bonded over fashion, trade shows — I was in San Francisco for the ACC show — and she ended up becoming a client, too."

Now that's something that isn't likely to happen when you book a hotel! Neither is this: a friend recently checked into an Airbnb and found a large, full-frontal nude of her host framed on the wall. She said it was a little awkward making polite chitchat after that.

Oregon jeweler Jim Dailing is another "big fan" of Airbnb rentals. "I can usually find them closer to the event," Dailing says. "They're typically less expensive than a hotel and so much more cozy at the end of a busy day."

When Sydney Lynch showed at the JCK Design Center in Vegas last year, a four-day show requiring a minimum five-night stay, she went with Airbnb. She and her husband/partner like to stay outside the hustle-bustle of The Strip, so opted for a house more than a half hour drive from the show. They like the hominess of a kitchen and patio after a long show day. Since they drove in from Nevada, they had their own car with them.

Unlike Sydney, I'm bouncing around between shows. For this reason, I usually opt for a well-priced, centrally located hotel. I opted to stay as close as possible to the center of the four-mile strip of Las Vegas Boulevard

PHOTO: GETTY IMAGES

where the shows take place — including JCK, Couture, ACRE (American Craft Retailers Expo), and the Antique Jewelry & Watch Show. Note: we ended up paying about the same.

## FIND HOTEL DEALS

I've found hotels near big-city shows can be had for amazingly low prices if you shop around. For various reasons involving the unpredictability of my life, I often book last minute. Using Priceline a month before Vegas Jewelry Week, I landed at a 4-star hotel on The Strip for $67/night, or about $100/night with taxes and fees. It had a mini-kitchen and seating area with a view of the palm-tree-lined pool below. This was less than Sydney was paying for her Airbnb homestay, fees included. Because it was so close, Lyft rides to and from the shows weren't much over $5.

I booked another last-minute 4-star property at the Tucson gem shows last year, in the Santa Catalina foothills, for a base fee of $95/night. A coupon I found online knocked off another $24. Even with a $20 per-night hotel fee added to that, this was a good deal for hotels during the gem shows — let alone a luxury resort booked at the nth hour. Staying up there added significantly to the drive to and from town, but it meant I had a mini-kitchen and private balcony facing the desert. Depending on my schedule, I could watch the wildlife or the sunset, hike a desert trail, or take in the amazing mineral show held there. In the middle of a brutal northeast winter, all this was worth a little extra to me.

Here's the catch: I paid in full upfront and waived my right to get a refund if I cancelled. I used Express Deals on Priceline, which also meant I was booking blind. With Express Deals, you aren't told which hotel you're booking but you can pick the exact area of the city you want to stay, and see how many stars the hotel rates and its average customer ranking.

Show organizers offer group discounts on hotels, and that can make it a lot easier if you're showing there, but I often find I can beat those rates by comparing deals online. Basic American Craft Council membership benefits include hotel discounts through HotelStorm. This is worth looking into, though I've yet to hear a strong argument for that service. (ACC members also get discounts on car and truck rentals.)

Sydney Lynch often uses Hotwire Hotels. Like Priceline, success with this is largely a matter of figuring out the customer review data. With Priceline's Express Deals, I can get up to 60 percent off the official price of a room. I stick to hotels with customer ratings of 7/10 minimum and I'm rarely disappointed. Often, I can tell which hotel I'm getting by looking at the hotels listed on Priceline under those parameters in that neighborhood, or at least narrow it down. If you're booking a two-star hotel in Manhattan, you're not going to get luxury digs but if hundreds of customers give it a 7+ average . . . well, you're not going to find bed bugs.

## KNOW YOUR LIMITS

If you are just starting out, you may be more willing to cut corners to save, but don't go too far. As the recent spate of jewelry robberies at shows points up, you may be better off spending a few bucks extra to guarantee your safety and the safety of your inventory.

After a couple of decades on the road, you may find you're getting pickier. "I'm at a point in my life where I'm simply not willing to put up with discomfort or inconvenience," says Hedda Schupak, who's been working the jewelry trade shows as an editor since the 1980s. "I have a list of things I refuse to put up with anymore, such as waiting in line more than 10 to 15 minutes and miserable travel itineraries."

"Yes to that!" Sydney Lynch agrees. "I've earned my rights to a decent comfort level and good food when on the road." I'm at this point, too, as you may have gathered by the 4-star resorts.

"If my choice is cheap but unpleasant and inconvenient or costly but pleasant, I'll suck it up and pay for the better experience," Hedda says. "I might make the trip a few days shorter to save money or skip another trip I might have taken to make up the difference, but I won't compromise on comfort."

Put in the time researching deals and make maximum use of your loyalty programs and, hopefully, you won't have to make any such compromise.

***"I've had really good Airbnb experiences overall and the reviews tend to be pretty accurate. But every experience has been different with the individual host, the city, the area."***

***"I'm at a point in my life where I'm simply not willing to put up with discomfort or inconvenience. If my choice is cheap but unpleasant and inconvenient or costly but pleasant, I'll suck it up and pay for the better experience."***

**find more online**

"Where Makers Stay on the Jewelry Show Circuit"

**www.interweave.com/category/article/jewelry**

**CATHLEEN MCCARTHY HAS** covered jewelry and business for *Town & Country, JCK, The Washington Post,* and her own site, TheJewelryLoupe.com.


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# Great Create

*By Helen Driggs,*
*Photos by Jim Lawson*

## Plan, sketch, test and lay out: tools to make designing jewelry better

*I'M EQUALLY HAPPY IN traditional artist's supply stores and at jewelry tool suppliers. Both provide endless inspiration and discovery to satisfy my every creative curiosity. I went to art school, and whenever I experience a fit of the doldrums, a quick trip to my art store always snaps me out of it. For me, brushes, pigments, paper, paint, metal, gemstones, pliers, and mills are all fair game for any creative scenario — especially when they are new.*

### Ruler, Dividers, Scribe

Nothing beats this basic tool trio. If you intend to make jewelry seriously for even a few years, please, please, get these three essential tools. They aren't sexy, colorful, fascinating, or trendy — they are downright boring, actually. But a decent **6-inch steel millimeter and inch ruler**, a hardened, very **sharp steel scribe**, and a well-made **set of dividers** will never let you down.

And please learn what the divisions are on the ruler. Most jewelry measurements are denoted in millimeters, so you must know how to use the ruler accordingly. Then it is important to learn to make guidelines on the metal using the dividers or the scribe before you saw, shear, drill, cut, or fold. Any professional jewelry supply house will have them, and if you want the best dividers on the planet, go for the Starretts.

## Don't Forget the Stencils!

Why would you need a stencil for metalwork? I thought you would never ask. These timesavers from the paper-craft aisle at the local art store are so useful when you need help creating a piece rapidly. Use them to generate pleasing saw-piercing patterns on precut metal blanks, or to create selective direct texture regions for stamping, or for creating individual sawn elements for soldered overlays, or for . . . well you get it.

The most awesome stencils I have come across these days come from Ranger. Their line of stencils for **mixed media layering** really rock for metalwork, too. I love the Dina Wakley designs best, like **Big Leafy** (MDS54412), **Jungle** (MDS47490), and **Scales** (MDS58281) because they are scaled appropriate to most jewelry work.

Another "Why didn't I think of that?" tool from the Ranger line is the brand-new **Letter It Acrylic Stamp Block** (LET60888) — but not for rubber stamps. I use mine to lay out rectangular and square jewelry pieces in combination with my machinist's L-square: that handy grid makes lining up straight edges foolproof. Plus, it's transparent! Wowsa!

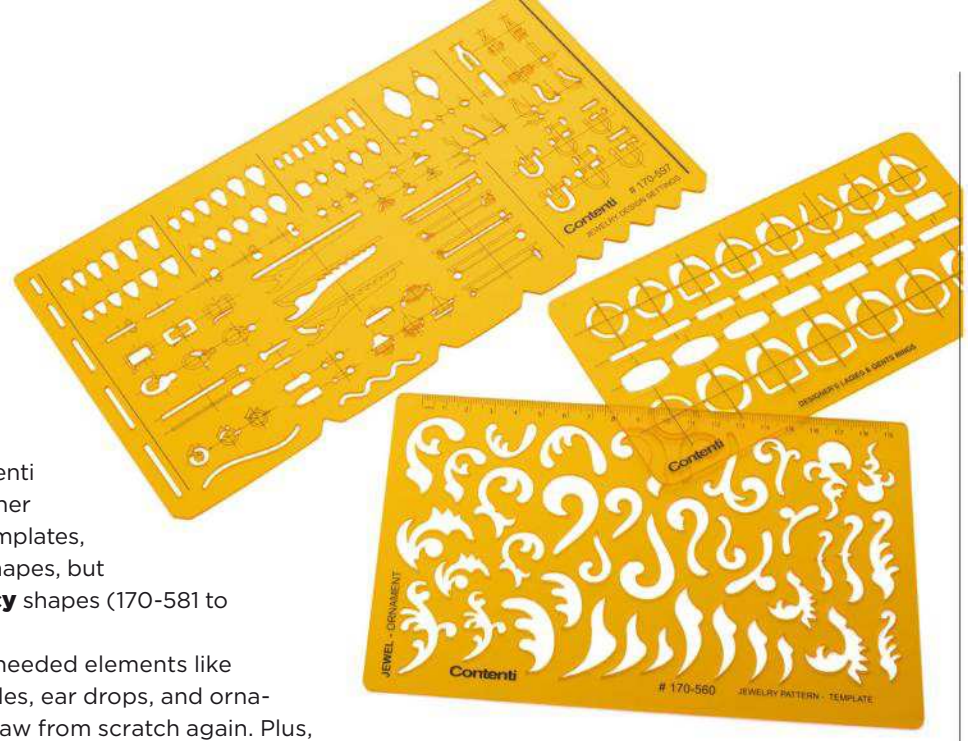



Then, there are the **texture** tools. Oh, my, my. These handy little helpers are created for painters to introduce texture to a painted surface — but I use the machined edges on the tools as templates for sawn lines on the edges of sheet metal. I have even sawn bezels using them. I love the fact that they are all transparent, washable, and punched to fit on a ring for easy toolbox transfer. No reason not to use them for metal clay as well. **Texture Tools** (INK44567) and **Texture Tools 2** (INK47438) will inspire you for sure!

Another great addition to your design arsenal would be the Susan Lenart Kazmer **Ice Resin Paper Sealer and Ice Resin Tint** available in a nice range of colors. Ranger now stocks the entire Ice Resin line of products, too. Give these a try on your next creative endeavor.
**More at http://rangerink.com**

Also, you owe it to yourself to check out Eugenia C exclusive **Design Stencils for Enameling** from EuroTool. These are made from thin, semi-flexible acrylic that can be cleaned in water after use. Remove the protective brown paper to use them, then position the stencil over your work, sift the powdered enamel through the openings, and gently lift — voilà! Perfect sifted designs in a flash. Two sets are currently available: **Echos** (STL-100.00) and **Reflections** (120.00), and several new designs are soon to be released.
**More at http://www.jewelrytools.com/eurotool**

## In Doubt? Try a Template!




I have discovered the usefulness of templates recently, and the brand-new jewelry designer templates from Contenti have really knocked my socks off. Contenti also offers standard jewelry designer needs like **ring** and **gemstone** templates, **rounds**, **ovals**, and other **basic** shapes, but my personal favorites are the **fancy** shapes (170-581 to 560).

These feature many commonly needed elements like ellipses, shields, rounded rectangles, ear drops, and ornaments that you'll never have to draw from scratch again. Plus, you will always get perfectly symmetrical pairs of elements when using a template if you just flip it over and draw another element. Think ring shank decorations, bails or decorative pendant doodads. Best of all? Every single template features a wavy, zigzag, or curvy edge that will also come in handy for creating non-straight edges on your next masterpiece.

**More at https://contenti.com**


While I am on the topic of templates, I would be remiss not to mention the awesome **designer gemstone** templates created by John F. Heusler, G.G. You can use them creating both lapidary and metalwork pieces. The series of a dozen different templates is made of rigid acrylic and built to last a lifetime; the shapes are sublime! One brilliant feature is that each individual shape is repeated in a series of sizes. When I teach with these, my students go bat crazy over them.

**More at http://www.slabstocabs.com**

**next time**
Texture and Patina Tools

## One Last Little Treasure

This sweet little pocket wire gauge (GAU-144.10) is the perfect tool to keep in your pocket or wallet the next time you head off to a trade show or supply house. Measuring in at a petite 1-inch by 3.25-inches, this great little gauge measures wire and sheet ranging from 8 gauge down to 34 gauge. I love mine!

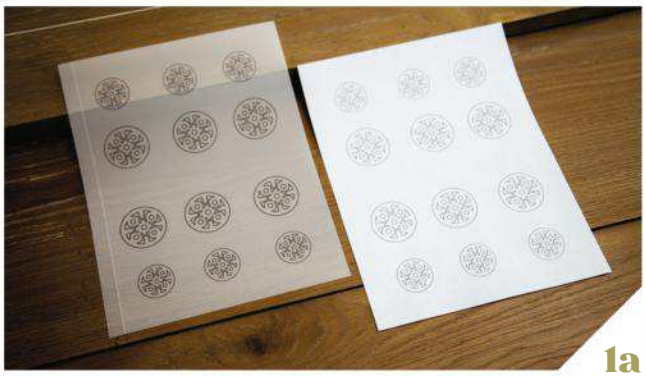
**More at http://www.jewelrytools.com**

**HELEN I. DRIGGS** is an experienced teaching artist and has appeared in 6 instructional jewelry technique videos. Her first book, *The Jewelry Maker's Field Guide*, was published in 2013. Follow her blog: materialsmithing.wordpress.com; Instagram: hdriggs_fabricationista; and Twitter feed: @fabricationista for news, updates, and her upcoming workshop schedule.

Simplify your piercing projects with graphic transfer sheets **By Michael Anthony Cheatham**

# Graph It!

1


1a

Pierced metal jewelry designs are among the most exquisite pieces you can make. But placing your design on the metal before piercing and cutting can be time-consuming and frustrating. To make it much easier, you can use your computer, printer, and graphic transfer sheets to affix your design to your metal.

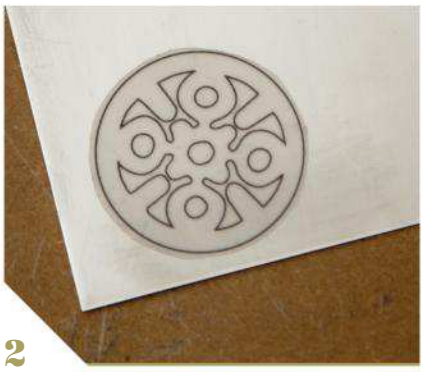
## Tip for Novices!

***Saw just outside the lines so you don't saw into your design. You can always file back to the line or whatever your design calls for.***

**1–1a** The first step is to come up with the design. Once the design is completed, copy it to a plain piece of copier paper. Chances are your design will only take up a small area of the whole piece of paper. I usually make 10 to 12 copies, cut out each design element, and affix them all to one sheet of paper. Because every time you use this technique you'll destroy the decal you're using, I like to have a whole sheet of them ready to use at any time.

Now copy your full sheet of designs onto one sheet of the Graphic Transfer sheets. I don't use a laser printer, so I allow a few minutes for the transfer sheet to dry before I touch it.

**2** Once the ink is dry, cut one image from the Graphic Transfer sheet, remove the protective backing, and apply it to a clean piece of metal just like you would a decal to a window. Any skin oil or dirt will prevent the decal from sticking to the metal. Make sure there are no air bubbles. Take a soft piece of cotton and lightly rub the decal to make sure it has adhered to the metal. Don't rub too much or for too long.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OPENING PHOTO: JIM LAWSON; PROCESS PHOTOS: MICHAEL ANTHONY CHEATHAM

# Technique Demo

***Use this technique to simplify transferring your pierced design to your metal — then use your pierced metal in the jewelry design of your choice!***

## What You Need

**SKILLS**
Drawing
Basic computer skills
Sawing, drilling, and punching metal

**TIME IT TOOK**
5 minutes to 1 hour, depending on project and skill level

**MATERIALS**
- Chartpak DAF8 8½"x11" Graphic Transfer Sheets for Copiers or similar product
- Standard white copier paper, 8½"x11"
- Your design
- Your choice of metals

**TOOLS**
Computer, printer, jewelers hole punch or drill, jewelers saw and appropriately sized blades

**SOURCES**
The Graphic Transfer Sheets can be found online. I purchase the Chartpak version from Amazon.com. Jewelry using this technique can be made successfully with a minimum of tools and supplies you may already have on your bench, or they can be found at any well-stocked jewelry supply vendor, many of whom can be found in our Advertisers' Index, page 95.

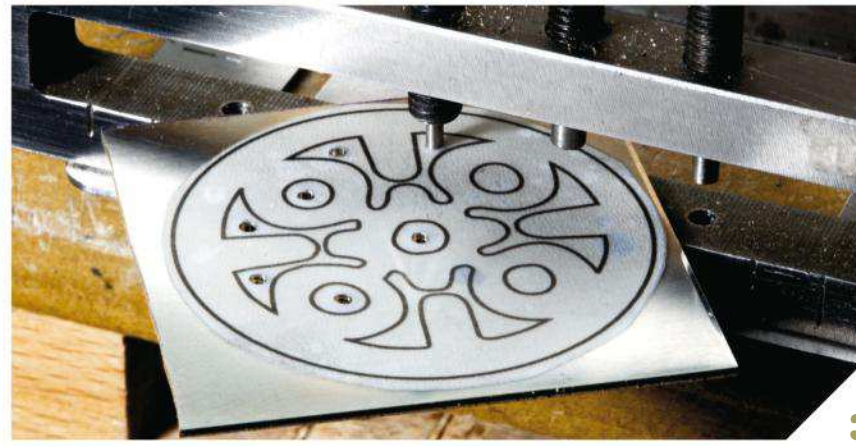
***Most printers will allow you to adjust the size of your copies. If you're looking to make a pendant with matching earrings, make two smaller copies of your design and one large copy on white paper, transfer these images all to one sheet of white paper, then copy onto the graphic Transfer Paper. It's a couple extra steps, but you'll soon have a library of designs on transfer sheets ready to use at any time.***

**TIP!**

## Make These with Michael

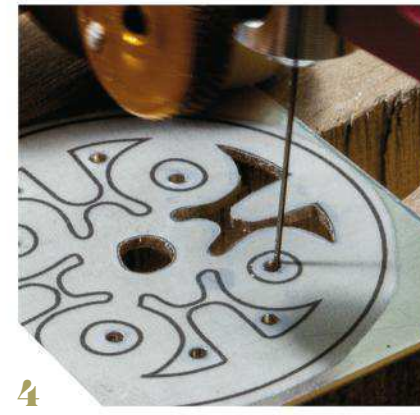
Silver Dust Applique Earrings

**www.interweave.com/jewelry**



3

**3** Using a punch or drill, place holes in your design where it's called for. For this project, I've placed the holes in the negative spaces that I'll be cutting away. Make sure not to scratch, tear, or lift up the decal. It will not re-adhere to the metal. If you do, use a little scotch tape.



4

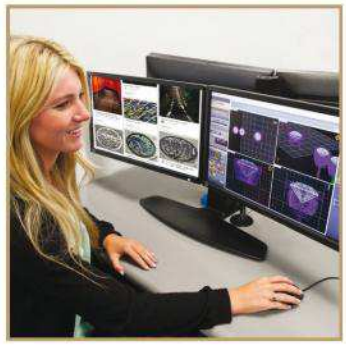
**4** Wax your saw blade (I used a 5/0) and insert one end into your saw frame. Run the other end through the project and connect to the other side of your saw frame. Then adjust the tautness, and firmly lock blade in place.

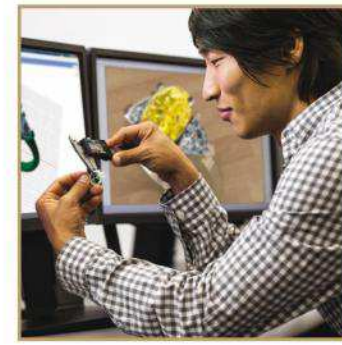
5

**5** All the unessential design elements have been sawn out. Now you'll file any areas that need attention and make sure your design is exactly how you envision it. From here, you are ready to use your pierced work in the jewelry design of your choice.

**Note:** Always look at the discarded pieces before you toss them in your scrap drawer. I'll use the pieces I have cut from this design as abstract elements on other pieces.

**MICHAEL ANTHONY CHEATHAM,** Gemologist (GIA), FJC, has been making jewelry, cutting gemstones, receiving awards, and teaching his craft for 25+ years. Mostly self-taught ,he studied with well-known Navajo Jeweler Richard Tsosie at Idyllwild School of the Arts Summer Program to learn granulation. Michael continues to show his jewelry at art festivals, American Indian art markets and museum art shows in the western United States.





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The World's Foremost Authority in Gemology™

How to convert a stone bangle into a bracelet that easily goes on and off **By Grant Robinson**

# It's All on the Wrist


1


2


3

A CERTAIN AMOUNT OF LUCK is involved in finding the perfect fit when it comes to bangle bracelets, which come in many diameters and widths. Even when a perfectly fitting bangle is found, a person's hand can change with time so that a simple squeeze through the bangle's center on the first day may not be so simple years later.

The solution? A conversion of that favorite fixed bangle to a design that opens using a swivel hinge, and then stays securely closed with magnets.

## SPLIT THE BANGLE

**1** I started with a lapis bangle that used to be a perfect fit, but now has too small an opening for the owner's hand.

**2–3** I started this conversion by first cutting the bangle in half with a trim saw, using a diamond blade so the ends would be flat and true.

## CREATE WAX END CAPS

I wrapped the four new ends with thin tape and applied a layer of silicone grease to the tape so that no wax would stick. Later, the tape would also act as a spacer to counteract the small amount of shrinkage expected from the replacement of the wax with gold during casting.

OPENING PHOTO: JIM LAWSON; PROCESS PHOTOS: GRANT ROBINSON

## What You Need

**SKILLS**
Lost-wax casting
Soldering
Sawing
Filing
Riveting
Polishing

**TIME IT TOOK**
5 hours

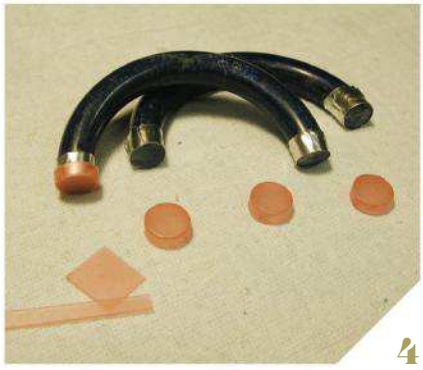
**MATERIALS**
- 1 and 3 mm 18K gold tubing, 0.7 mm 18K gold wire, 18K gold casting grain
- 1.5 mm 18K gold link chain
- 5 mm cylindrical Neodymium magnets
- Low-melt sprueing wax and 24 gauge wax sheet
- BeautyCast gypsum investment by WhipMix Corporation
- Jeweler's rouge
- Epoxy
- 18K medium paste solder
- Pickling solution (I use 10% hydrochloric acid)

**TOOLS**
**Lapidary:** Trim saw

**Metalsmithing:** Standard hand files and pliers, cotton polishing buff, fine to coarse grit abrasive papers, jeweler's saw and blades, flex shaft and handpiece, 5 mm round and cylindrical diamond burrs, 2 mm cone burr, rubberized abrasive wheels, charcoal soldering block, large and small propane/oxygen torches

**Casting:** Waxing pen, hot water bath, burnout oven, broken-arm mechanical casting machine, casting flask, tongs

**SOURCES**
Most of the tools and materials for this project are available from well-stocked jewelry supply vendors, many of whom can be found in our Advertisers' Index, page 95.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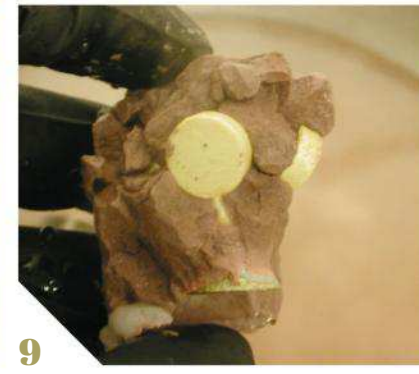
9

***Using a small propane/oxygen torch, I decided to solder the fasteners en masse, instead of individually, on a charcoal block. I used 1 mm long segments of 1 mm diameter gold tubing spaced evenly with paste solder along gold wire. The resulting arrangement allowed me to cut the fastening pins apart and finish them later after a quick acid pickle.***

**4** I cut strips of standard 24 gauge pink wax sheet to fashion four end caps, using a hot waxing pen to melt the seams together.

**5** Next I added sprues to the finished wax caps and arranged them onto a rubber base in preparation for surrounding them with investment for casting.

## LOST-WAX CASTING

**6** Once all the wax pieces were sprued to the base, I placed a cellulose-lined metal casting flask around them, and poured standard gypsum-based investment into the flask to surround them. Then I allowed the liquid to set while submerged in a 38 °C water bath.

**7** A standard burnout oven preheated to 500 °C was then used to melt and vaporize the wax pieces over the course of 2 hours. This created negative spaces in the investment ready to be filled with molten gold.

**8** Safety is always a priority, so with eye-protection and appropriate gloves, I used a propane/oxygen torch to melt 18K yellow gold in a standard centrifugal casting machine, and forced the gold into the casting flask (still hot from the oven) by releasing the spring.

**9** After quenching the flask in water, I removed the gypsum investment to reveal the rough gold casting.

**10** To remove any oxides, I pickled the raw casting in an acid bath.

## FINISHING AND RIVET PREPARATION

**11** Finishing began with sprue removal using a jeweler's saw, then trueing all the surfaces using standard hand files and abrasive papers.

**12–13** For the rivet, I began by cutting notch lines into 3 mm diameter gold tubing using a jeweler's saw, then soldered a short segment of the notched tubing onto a flat base made by flattening a piece of the same tubing.

The design also called for an additional decorative element of gold chain on the outside of the bangle, so I needed to make fastening pins to secure the chain links to the stone.

**14–15** Using a small propane/oxygen torch, I decided to solder the fasteners en masse, instead of individually, on a charcoal block. I used 1 mm long segments of 1 mm diameter gold tubing spaced evenly with paste solder along gold wire. The resulting arrangement allowed me to cut the fastening pins apart and finish them later after a quick acid pickle.

**16** Before I could assemble the bangle swivel hinge with the rivet, I needed to complete final finishing of the gold pieces. I used a flex shaft with progressively finer rubberized abrasive wheels and a cotton felt buff charged with jeweler's rouge to achieve a high polish.

**17** I also wanted to add a bit of texture to the edge of the caps, so I used a standard milgrain tool to create a micro-scalloped border on each cap by hand.

**18** With the surface finishing completed, I made a hole in the center of the two hinge caps, inserted the rivet, and splayed the notched end with a tapered punch to complete the swivel hinge, using a wooden dowel as a back support for the rivet.


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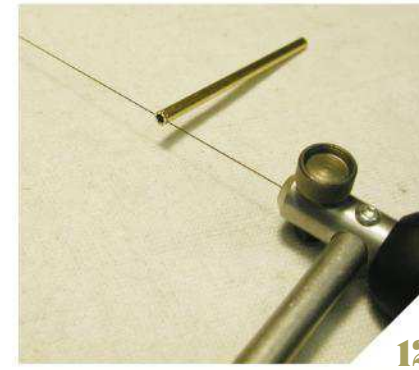
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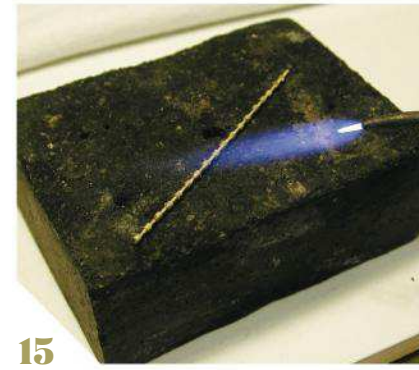
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## Why the 'Scope

THEIR TOOLS, PAGE 10

## See More Work

THEIR TURN, PAGE 8

***I also wanted to add a bit of texture to the edge of the caps, so I used a standard milgrain tool to create a micro-scalloped border on each cap by hand.***

### MAGNET & DECORATION PREPARATION

**19** I marked out the attachment points on the bangle for the gold chain fasteners, and used a 0.75 mm diamond bit to make holes at the correct positions.

**20** Next, I created holes in the cut lapis end faces for the 5 mm magnets using diamond ball and cylindrical burrs, and made divots in the other two faces to accommodate the raised rivet profiles.

**21** Once the magnets were secured in place with epoxy and the fastening pins were prepared, it was time to assemble all the pieces.

### FINAL ASSEMBLY

**22** The caps were secured to the lapis with epoxy, as well as the first fastening pin for each of the four chain elements. The design called for a zigzag pattern for the chains across just the outside of the bangle (so as not to touch the skin), so each of the four chain elements was started closest to a cap and then attachment points crossed over from side to side, one fastening pin at a time.

The last act of finishing was to round the tops of the seated fastening pins with a cone burr to make sure they were all smooth and the same height.

**23–24** The two halves of the finished bangle now rotate 360 degrees relative to each other, and snap together when the magnets meet for a secure closure.

**GRANT ROBINSON** is a lapidary and studio jeweler who lives in Chapel Hill, NC. His website is GrantRobinsonDesigns.com.

# A Finishing Jewel

## Finish metal, stone, glass, and more, all with one machine: the JoolTool

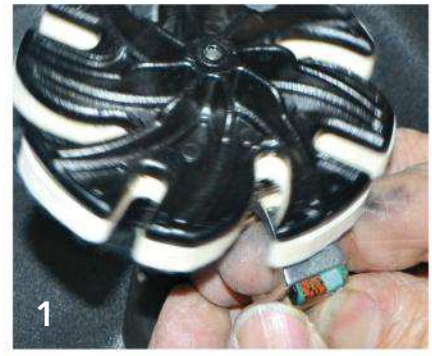
***by Jeff Fulkerson***

If you're looking for a way to up your finishing game, you seriously need to consider the JoolTool by Anie. It is the most versatile tool on the market. You can polish stones, metal, and metal clay. You can sharpen tools and polish hammer faces, clean up castings, and work on glass or enamel pieces. The list goes on and on.

I think the best way to think of the JoolTool is as a series of systems. Each system consists of the appropriate polishing or sanding disks for the job at hand. You have a deburring system, a jewelry polishing system, a sharpening system, a tool polishing system, a metal clay system, a stone polishing system, a glass system, and so on.

The way the JoolTool works, and what makes it unique, are the see-through disks that hold the different grinding/sanding/polishing pads. Because of this transparency, you can look down on your piece and actually see the surface as you're working on it. (Think of looking through the spokes of a bicycle as it goes by.) This gives you unprecedented control and confidence. And because you're working on the side of the disk and not the edge of a large polishing wheel, as you may be used to, the chances of the machine grabbing your piece and flinging it into oblivion are greatly reduced.

The tool itself is very versatile. Because it's portable and lightweight, you can bolt it down to your bench in your studio, or even carry it to events




with you. You can use it upright, as you can see me doing, or at least see my hands grinding a stone **(photo 1)** and polishing a silver ring **(photo 2)**. You can also turn the machine 90° **(top)** and use it like a traditional polishing arbor.

Setup is simple and quick: you can be working in 10 or 15 minutes after you unpack the machine. Each machine comes with clear written directions and a very detailed DVD where Anie (pronounced Awe-Nee) shows you all the ways you can use the JoolTool.

There are also a number of add-ons available for the machine, including a flex-shaft attachment and a vacuum/dust collector. My favorites are the 3M sanding brushes. While the tool comes with only a few of the disks and a couple of pads, I would recommend that when you purchase a machine you also purchase the appropriate disk kit for your main interest in using the tool, whether it's polishing jewelry or polishing hammer heads. The only downside is that once you've used the JoolTool, you'll want to get all the accessories, which is a little like trying to buy all of


the clothes and accessories for a certain doll that will remain nameless!

So if you're just cramped for space, scared of that great big ol' polishing cabinet, or want portability and versatility, the JoolTool really is the solution you've been looking for.


**Enter the sweepstakes for a chance to win a JoolTool and various additional disks from Fire Mountain Gems and Beads — a $585 value!**

April 20 - May 20, 2018

www.interweave.com/fire-mountain-gems-beads-giveaway-2018/

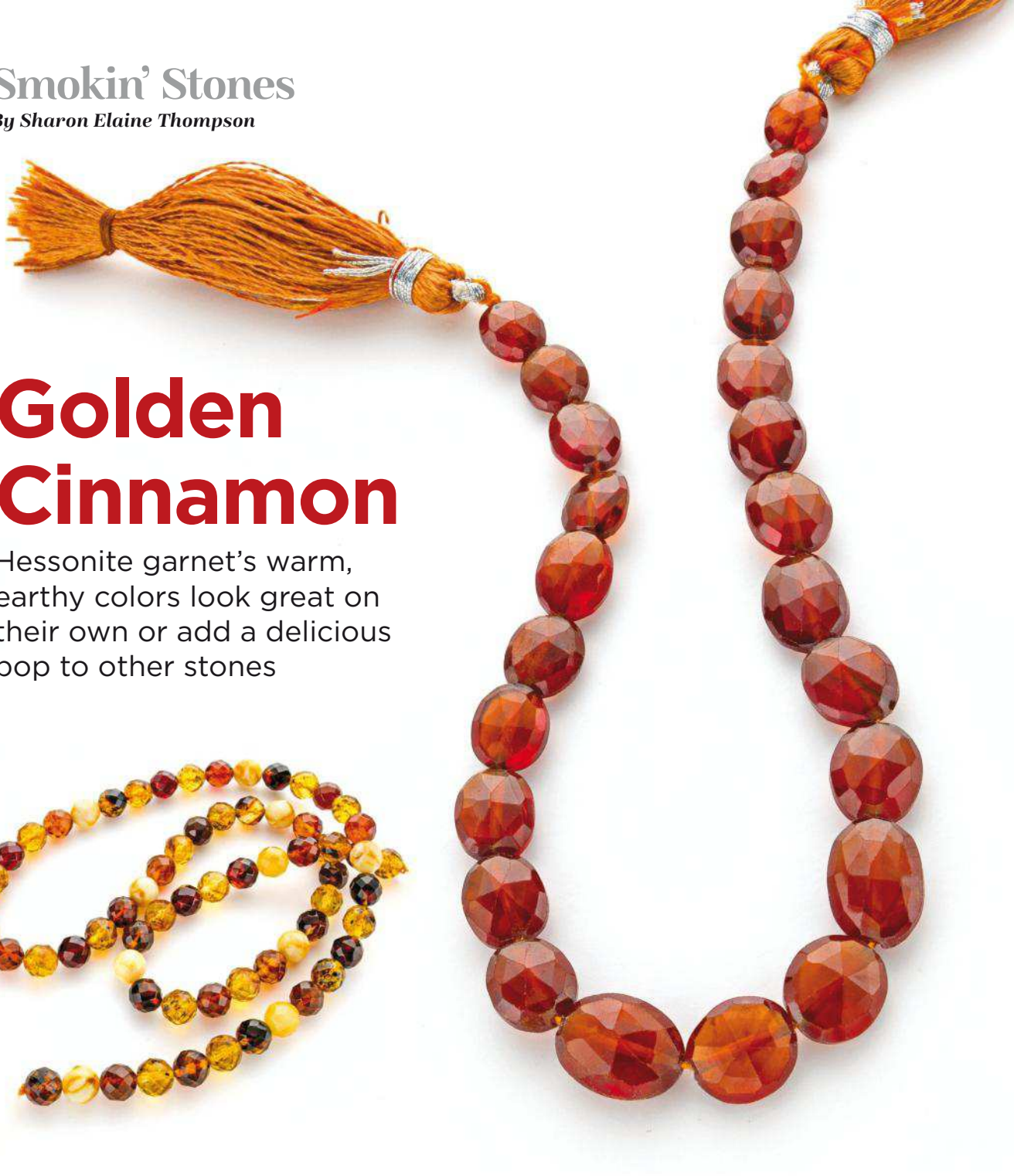
**JEFF FULKERSON** has been creating imaginative jewelry for 30+ years and has taught at museums, schools, and events. The award-winning silversmith has studied such Native American greats as Richard Tsosie, Jesse Monongye, and Michael Cheatham. Noted for his meticulous execution and attention to detail, Jeff loves the creative process of seeing his ideas take shape and come to life. See more of his work at www.aldenjeffriesdesign.com.

*The JoolTool and accessories are available at www.firemountaingems.com.*

*By Sharon Elaine Thompson*

# Golden Cinnamon

Hessonite garnet's warm, earthy colors look great on their own or add a delicious pop to other stones





WITH ITS SHADES of yellow, gold, and orange that can verge on red, hessonite, sometimes referred to as "cinnamon garnet" or "golden grossularite garnet," is as beautiful as it is unexpected. Unexpected because it's possible you still think of garnets as reddish stones only. Not so — they come in all colors but blue.

Garnets are actually a group of minerals. They all have the same structure but with differing amounts of different chemicals in that structure. That means that, within a range, they have different colors. Hessonite and tsavorite — gold and green — are actually two varieties of grossularite garnet. They also have slightly different RIs (refractive indexes), hardnesses, and densities. Not enough for jewelry makers to worry about, but enough to get mineralogists and gemologists arguing.

The colors of hessonite make it a natural for setting in gold. Or try a gold bezel and a golden hessonite in an oxidized silver piece. Hessonites also make perfect accent stones for that incredible red/orange/brown/yellow agate or jasper you've been dying to make into a statement necklace or bracelet. When buying, look for transparency, excellence in cut and polish, and the exact color that gets your heart racing.

PHOTO: JIM LAWSON; HESSONITE, COURTESY FIRE MOUNTAIN GEMS

# Just the Facts

### How much does it cost?
Faceted stones range in size from less than a carat to more than 20 carats. Commercial, ring-sized stones of a few carats run from $10 to $50 per carat. Larger, gem-quality stones can be significantly higher. Cabs, which may be included, will run less. Beads run from $15 to $150 per strand depending on size, shape, clarity, and color.

### How hard is it to find?
You should be able to indulge your love of hessonite easily from Internet vendors to local shows.

### What kind of jewelry can I put this in?
Hessonite is 7 to 7½ on the Mohs hardness scale, and garnets have no direction of cleavage. They're tough enough to wear in any form of jewelry.

### How easy is it to set?
Easy with good prong-setting or bezel-setting skills.

### What settings are best?
Most garnets, being transparent, are faceted. So prongs allow the most light penetration. Bezels provide most protection.

### Artisan/studio dos and don'ts:
Treat hessonites as the fine stones they are, but they are tough and durable and should withstand most manufacturing processes. As with any fine stone, however, treat them respectfully and gently if there are internal crystals or fractures.

### Wearer dos and don'ts:
Wear and enjoy — and brag on their beauty.

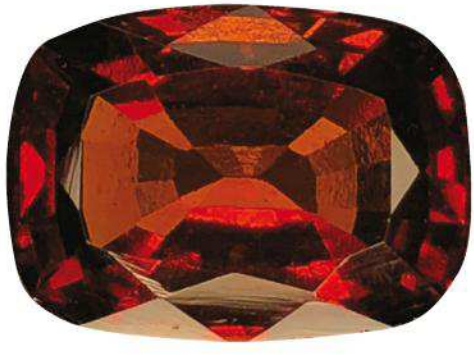


PHOTO: LEXI ERICKSON

**SHARON ELAINE THOMPSON** is a freelance writer based in Oregon. She has written for *Lapidary Journal Jewelry Artist* since 1987. You can learn more about her and read previous articles at www.jewelryartdiva.com. She also blogs frequently about birthstones and other stones for www.interweave.com/jewelry.

***When buying, look for transparency, excellence in cut and polish, and the exact color that gets your heart racing.***

***Treat hessonites as the fine stones they are, but they are tough and durable and should withstand most manufacturing processes.***

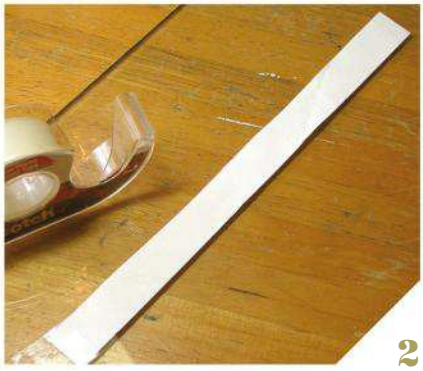
## Accent with Hessonite

**HIDDEN CATCH, PAGE 32**

Make a leaf form bracelet and clasp using springy new EZ 960 sterling clay and garnets **By Noël Yovovich**

# Hidden Catch


1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FULL DISCLOSURE: I'm an on-again/off-again metal clay user. I was an early adopter when original PMC first hit the market, and again when base-metal clays appeared. I do love some of the things these clays are good at and make use of them, but their limitations have always frustrated me. I'd say the main shortcomings were the lower strength of fine silver clays, and above all, the need to work really fast to avoid all the problems caused by rapid drying. Finally, though, metal clay has arrived where I'd hoped it would be in the first place (except I don't think it will ever be a good candidate to throw on my potter's wheel!).

For this project, I tried out Cool Tools' EZ960 Sterling Silver Clay. I was particularly interested in the notion that sterling silver clay might actually be springy! So I bought two 25g packages (and got a promotional 10g package thrown in). I looked at some tutorials online and then jumped right in.

This is the easiest to use of any metal clay I've tried, and I've tried pretty much all the silver clays, though I haven't kept up with the plethora of base metal clays. Here's what I like about it:

- Rolls out beautifully
- Has a much better working time than my old favorite, PMC+
- Rehydrates in a snap, back just as good as it started — yay!
- Sticks to itself quite readily with minimal encouragement, though I still think it's a good idea to score-and-slip whenever possible
- Seems relatively strong in the unfired state, though still brittle; strength after firing seems better than fine silver clay but still fairly bendy
- Polishes like a dream, taking a high shine very easily

## EVERYTHING AT THE READY

1 First, decide how long the bracelet should be and cut a strip of paper that length. This bracelet is going to overlap about half an inch and have a clasp, so the length needs to include that half inch, enough room for the bracelet to fit loosely on the arm, and then an extra 10% because of shrinkage.

2 The paper strip is taped to the back of the work surface (here, a piece of glass) so I can keep track of the length as I work.

3 Here are tools and materials I will be using. Clockwise from left: EZ960 silver clay; a poly blade, also called a tissue blade, with tape on the blunt edge so I don't grab the sharp edge; graduated color-coded slats for rolling an even thickness of clay; wisteria leaves and some sage leaves I didn't end up using; some tubes to use as punches; and a plastic coil-rolling or work surface. I also use CoolSlip™, an excellent non-stick spray from Cool Tools, a water spray, a small brush, and a tiny spatula.

OPENING PHOTO: JIM LAWSON; PROCESS PHOTOS: NOËL YOVOVICH

**AN EASIER WAY**

Skip the clasp,
see page 38

## What You Need

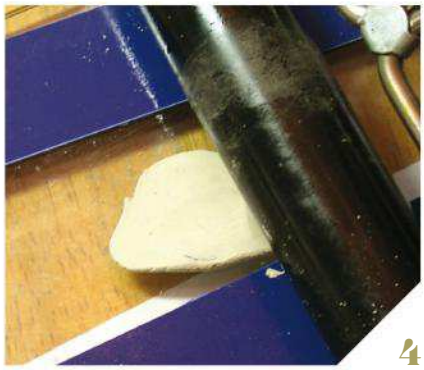
**SKILLS**
Basic metal clay work
Basic metalsmithing
(for optional clasp)

**TIME IT TOOK**
6-7 hours
**Making the bracelet:** 1½ hours
**Firing:** 2+ hours
**Setting stones:** 2 hours
**Optional clasp:** 1 hour

**MATERIALS:**
***Bracelet Only***
- EZ960 Sterling Silver Clay, 30-35g
- Faceted stones; in this bracelet, rhodolite and hessonite garnets, 2mm, 3mm and 3.5mm
- Wisteria leaves

**TOOLS:**
***Bracelet Only***
Basic metal clay tools: thickness slats, roller, tubing to punch out settings, CoolSlip non-stick spray, poly blade, kiln with computerized controller

**SOURCES**
CoolSlip available from Cool Tools. Most of the tools and materials for this project are available from well-stocked jewelry supply vendors, many of whom can be found in our Advertisers' Index, page 95.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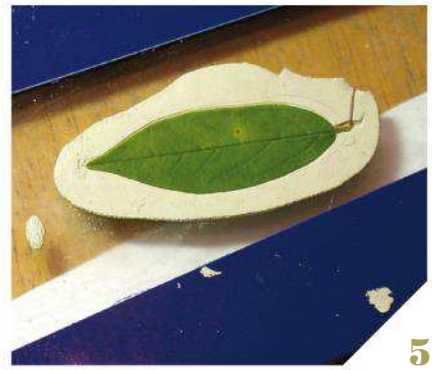
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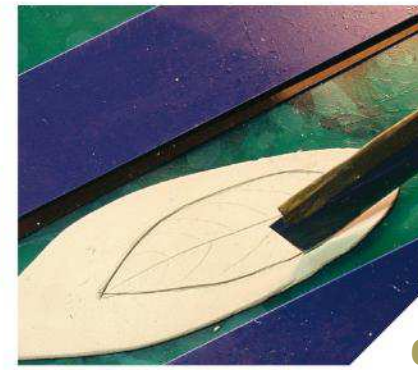
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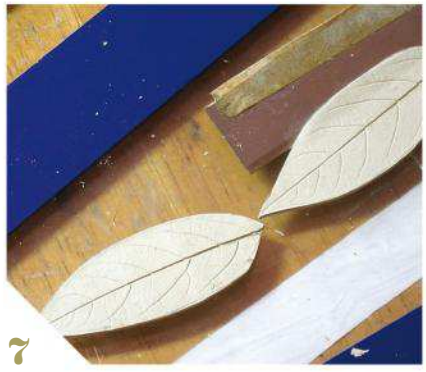
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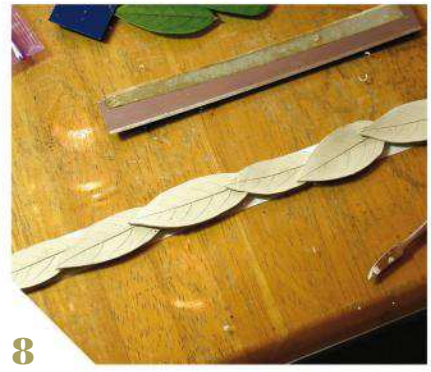
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9

## ROLL OUT LEAVES

**4–5** Pinch off a lump of the clay and roll it out — it does not need kneading first unless it is dry. If it cracks at all, add a drop of water and knead a bit. I found that it recovers perfectly, even when pretty hard (as my 10g package was).

On my first bracelet (see sidebar "Learn from My Mistakes"), I rolled the leaves 4 cards thick, but on the remake I went up to 5 cards. Use a light spray of CoolSlip and flip the clay after the first rolling pass. By the second bracelet I remembered that I prefer to roll clay out on a report cover. The plastic doesn't stick as much, plus its flexibility allows it to be peeled back in the event it does stick.

**6–7** Lay a leaf in place and roll again. Roll just once from one end to the other to avoid making multiple impressions. Carefully remove the leaf. Cut around the impression with the poly blade. I also like to use the poly blade to lift the leaf impression and move it to another surface.

## ASSEMBLE THE BRACELET

**8** When you think you have enough leaves, lay them out above the paper strip and adjust the arrangement to your satisfaction. Lift each overlapped leaf and wet the area below it. I like to scratch it as well, but these leaves stuck fine even when I didn't. Press the leaves together gently with special attention to the points.

**9** Here is when it helps to have worked on a report cover or some other surface that is easy to pick up. You need to flip the bracelet over without damaging it. The best way I've found is to lay a fairly stiff but light surface over it (I used a heavy mailing envelope), pick up the "sandwich" of three layers, and turn the whole thing over. This will allow you to smear the back edges together to make a strong bond.

**10** Add the parts for the clasp. The details of making the clasp are in the accompanying demo "Clasp for a Springy Bracelet, page 36."

## OPTIONAL STONE SETTINGS

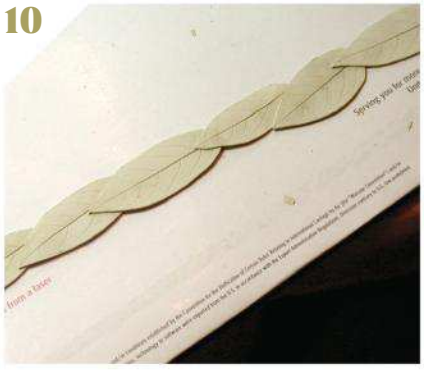
**11–12** If you want to accent your bracelet with stones, make patties to be settings. Measure the depth of the stones you want to use from table to culet. To punch patties, subtract the thickness of the leaves from the stone measurement, and choose a card number that is at least the remaining thickness.

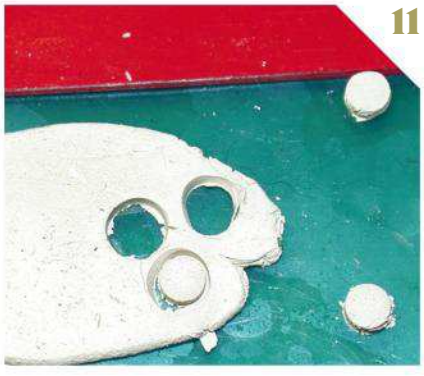
Roll out clay and punch out discs. (You could also use a clay extruder and cut off rounds.) The discs should be 3mm larger than the stones. Arrange as many as you like and stick them down with a little water. If you are using firable stones, you can sink them into the patties as soon as they are attached to the bracelet. Be sure to press them in until the table is even with the top of the patty. Allow the bracelet to dry.

**Tip:** To make things easier, you could use embeddable stone settings.

*You need to flip the bracelet over without damaging it. The best way I've found is to lay a fairly stiff but light surface over it (I used a heavy mailing envelope), pick up the "sandwich" of three layers, and turn the whole thing over.*

10





11

12

# Learn from My Mistakes

## The operation was a success but the patient died.

I'm like most people — I'd prefer to keep my failures private. But that's one way I learn. And if I share my screw-ups with you, you may avoid some of them. So here's what I did wrong.

To start with, when I made patties to add to the bracelet to become settings for stones, I didn't think through carefully enough how big they needed to be to end up large enough to accommodate the 3mm garnets I planned to use, so they came out too small. I've just moved to a town where I can't just run out and buy 2.5mm stones to use instead. What to do? I decided it was an opportunity to find out whether wet EZ960 will stick to already-fired EZ960.

I added more clay to the outsides of the patties **[see photo at right]**, and added a whole additional one for good measure, then refired.

My first firing was to 1675°F for 2 hours. I decided this time I would go to 1725°F for 15 minutes, as the clay instructions say you can. When my controller reached what it said was 1710°, it suddenly said "fail"! So I said "good enough" and shut it off.

When I opened the kiln, one end of the bracelet had pretty much melted and stuck solidly to the shelf **[see photo at left]**. I don't know why this occurred, but the silver of the melted part of the bracelet was crumbly, so the bracelet was ruined, even if I could find a way to get the bits of kiln shelf off the back.

So I remade the bracelet and this time I made the settings big enough. I also made it thicker. I had a total of 60g of clay, and after the second try, I ended up with a pea-sized lump left over, so the thicker, successful bracelet took about 35g of clay.

The good news is, yes, EZ960 fuses to itself when fired green-on-fired, even the new little disc with no mechanical attachment. There was no additional shrinkage, and no apparent change in the bendiness of the bracelet as a whole.

I always tell students that their first piece using a new technique won't be their masterpiece. I guess I should listen to my own advice!

HOW TO MAKE A

# Clasp for a Springy Bracelet

Making the clasp for this bracelet requires basic metal clay and/or metalsmithing skills, and took me about half an hour (plus time to add it to the bracelet). It's an elegant solution for a relatively uncommon need: a clasp for a springy, bangle-like bracelet.

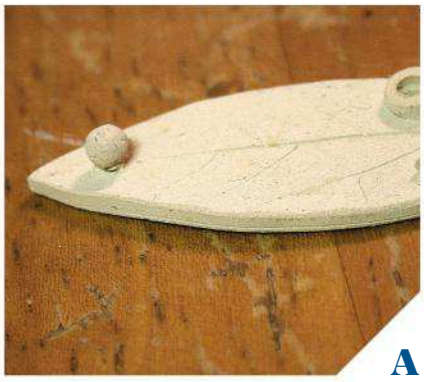
Easy to make with basic metalsmithing skills, and secure when used, it is really just a standard safety mechanism that becomes a clasp by virtue of going through an opening before fastening. As long as there is enough spring in a bracelet to allow it to open enough to slide over a hand without bending, this clasp is also great for forged or fabricated bracelets. It also works well on a hinged bracelet whose design allows for overlap.

**MATERIALS**

- Metal clay, tiny amount; 22g sterling silver (or other metal) wire, 1″

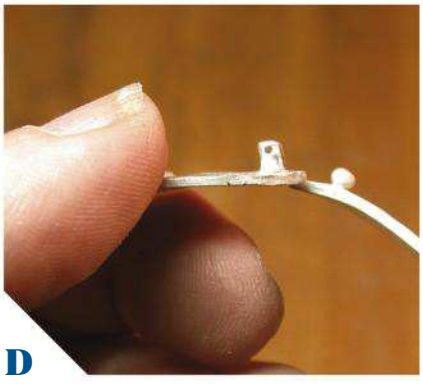
**TOOLS**

- Basic metal clay, basic soldering, drill/flexshaft and bit, saw and blade, needle files, sandpaper and finishing


A


B


C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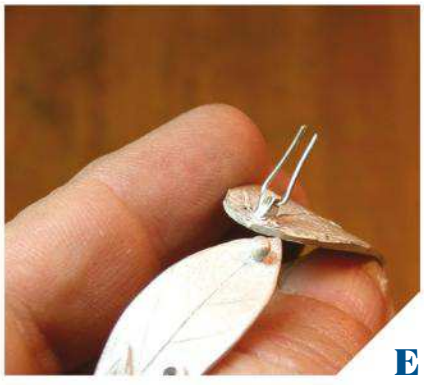
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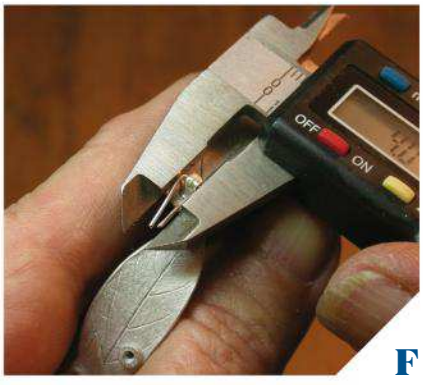


F

**A–B** One end of the bracelet — the end that will overlap the other end and be on the outside — needs a ball on a very short stalk. The ball can be whatever size you choose, but the size of a mustard seed is large enough. The other end gets a peg that will be sturdy and have room to be drilled with a hole that will accommodate a piece of 22g wire, so about 0.8 or 0.9mm. It's a good idea to start with a peg that is a bit oversized because it is easy to file it down and hard to add to it after firing.

**C** After firing, bend the bracelet into its final shape. Overlap the ends so that you can judge the height of the peg. It needs to be able to extend above the overlapped end enough for the hole you will drill to be exposed. If it is longer than needed, mark where it should be cut off and remove any extra. At the same time, refine the overall shape as needed. Extra thickness will require a larger opening at the other end of the bracelet, potentially weakening it.

**D** Drill a hole through the peg from side to side.

**E** Insert a length of 22g wire about 1″ long and bend it up on each side.

**F–G** Measure the width and depth of the peg plus wires to determine the size the hole needs to be for it to pass through easily. Drill, saw, and file to create the opening 2-3mm from the ball. The image of the finished clasp shows the finished opening.

**H–I** Bend the wires as shown. They will snap down over the ball to secure the bracelet. Solder them together and file the ends so that the loop can be opened with a fingernail but is no longer than necessary so it won't catch clothing or scratch the wearer.

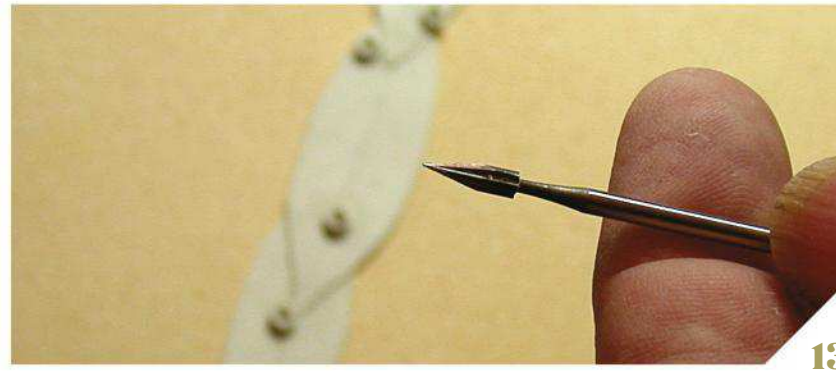
**Tip:** If you cannot solder the wires, they can be twisted together, but soldering is much more secure. They can also be melted together rather than soldering, which can form a comfortable ball on the end.

This type of clasp, without the hole, can be used as a secondary clasp, a safety, on box clasps, lockets, and many other types of fastenings, and is a good addition to the repertoire of any metalsmith!

G

H

I



13

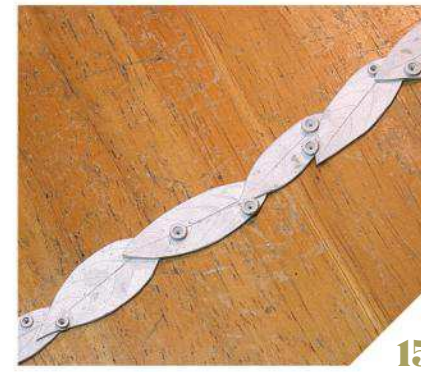
**13** It is easier to do some of the drilling for the stone settings before the bracelet is fired. I like to use this long, very sharp "slim reamer" to make the initial hole. Be sure not to let the hole get too big!

14

## SAND AND FIRE

**14–15** Once the bracelet is all assembled and dry, you can sand it. You can, of course, file after firing instead, but it is easier now, plus you will be able to rehydrate the dust that you sand off.

The bracelet is long and thin — and somewhat brittle! So I picked mine up together with one of my slats to support it and very gently sanded the edges. Use a dry brush to remove any dust, and fire according to package directions. Use as high and long a cycle as you can to maximize the density and springiness of the silver.



15

## BEND AND FINISH CLASP

I added hessonite and rhodolite garnets in three sizes — 2mm, 3mm, and 3.5mm round. You can set your stones either before or after bending the bracelet. I flush-set them. I described this technique in "Flush Setting Demystified" in a recent project in the January/February 2018 issue.

## Hessonite Garnets

SMOKIN' STONES
PAGE 30

## See More Work

THEIR TURN, PAGE 8

## Flush Setting Demystified

January/February 2018 *Lapidary Journal Jewelry Artist*

**www.interweave.com/jewelry**

## AN EASIER WAY

If you want to skip the clasp, make the bracelet as a bangle or a cuff. A cuff should be at least 6 cards thick and should usually be 6 inches long after firing. A bangle can be thinner and can be fired flat, then bent around and soldered or riveted together — just be sure it will be big enough to fit over your hand.

16

17

**16** Bend the bracelet bit by bit around a bracelet mandrel or a wood baseball bat. I love using my thrift-store Louisville Slugger, and it is hard enough to hammer on.

**17** Finish the clasp as described in "Clasp for a Springy Bracelet," page 36, set the stones, and patina or polish as you choose. As an extra step, I wanted to see whether heat-hardening, which works on sterling but not on fine silver, would make this bracelet stiffer and springier. It did!

I turned my home oven as high as it would go. According to Rio Grande, the ideal temperature is 572°F, but I have learned from experience that a slightly lower temperature for a slightly longer time works very well, too. I held it at temperature for about an hour and let it cool slowly because of the stones. It came out looking as though it had been briefly dipped in liver of sulfur but cleaned up easily.

The bracelet is somewhat springy and is fine for this type of design as long as it is enough larger than the intended wrist so that it can be slipped over the hand with only about an inch of spread as it goes over. I would not say it is springy enough to be put on like a cuff without bending and needing to be reshaped.

**NOËL YOVOVICH** is a professional metalsmith and maker, writing articles about jewelry making and teaching jewelry classes around the country. Learn more and watch for workshops and classes at Noël Yovovich Art Jewelry on Facebook and on her website: www.NoelYovovich.Bigcartel.com.

# More than a Skin of Paint

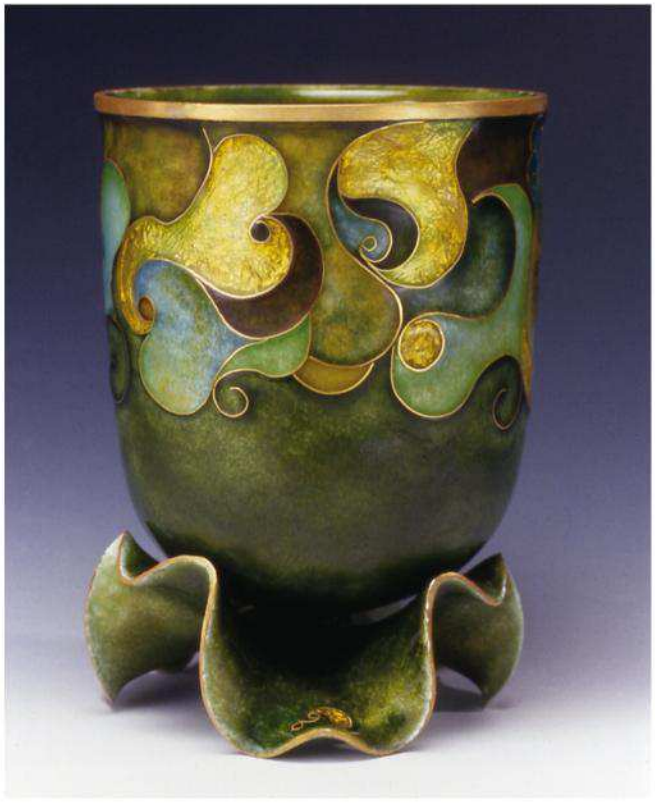
*Enameling jewelry is challenging enough, but these three artists meld glass onto their highly 3D metal forms*

***By Cathleen McCarthy***

**Wendy McAllister**
**Elysium Brooch**
Vitreous enamel, copper, sterling silver, glass
PHOTO: HAP SAKWA PHOTOGRAPHY

Enameling is never a simple process. Even the most basic cloisonné jewel requires multiple applications and firings — and then the metalwork required to set it. But enameling on three-dimensional pieces is a feat that requires patience, determination, and technical prowess. Because vitreous enamel is applied in ground form and then fired at about 1500°F, you have to deal not only with the melting point and fragility of your material, but also gravity. How do you evenly melt ground glass on a sculptural surface?

At its finest, sculptural enamel combines the most compelling aspects of sculpture and old-world painting, layered with glazes — but with glass fused to metal forms. The process of creating the jewelry you see on these pages takes a certain kind of skill and focus. Because it can go wrong in so many ways, it tends to attract a driven artist with a particular vision.



*Above:* **David Freda**
**The Fish Hunter Brooch**
Enamel; fine silver; sterling silver; 14K, 18K, and 24K yellow gold
PHOTO: COURTESY DAVID FREDA

*At Left:* **Erica Druin, Michael Good**
**Ceremonial Cup**
Cup: 24K gold cloisonné and basse-taille enamel on fine silver and 24K gold; stand: 24K gold cloisonné and basse-taille enamel on fine silver, formed in anticlastic technique
PHOTO: COURTESY ERICA DRUIN

***"Lalique was a naturalist, so I relate to him on many levels. The jewelry in that show was not only super rich, but the luster and how the glass was applied — there was something wonderful about that. Quality enamel work blows you away."***

**David Freda**
**Orchid Brooch**
Enamel, 20K gold, diamonds
PHOTO: COURTESY DAVID FREDA

**David Freda**
**Blue Bird Brooch**
Enamel, pearl, 18K yellow gold
PHOTO: COURTESY DAVID FREDA

***"A lot of my work goes back and forth between the more obvious geometry and the more organic, [but] when you look closely at flowers, you start seeing the symmetry and geometry beneath the surface."***

## David Freda

David Freda's enameled flora and fauna are so realistic, you may find yourself doing a double take. After studying jewelry making at the University of Wisconsin with Robert Ebendorf in the 1970s, he went his own way working as a jeweler between gigs in taxidermy, falconry, and botanical illustration. You can see evidence of all that in his work.

From the beginning, his interest was in making sculptural enameled pieces with the themes of a naturalist. Over the years, he developed a hollow-core casting technique that produces a life-like metal structure, sturdy but paper-thin. Freda's pieces are lighter than you expect — and the enameling is meticulous.

Yet it wasn't until 1998 that he got serious about his jewelry. That was the year he saw *The Jewels of Lalique* exhibit at the Cooper Hewitt. "I had given up on jewelry," he says, particularly with the direction contemporary art jewelry was taking. "I wanted to stay with my traditional metalsmithing techniques but there seemed like nowhere to go with it. I was on a downslope when I saw the Lalique show. It really opened my eyes."

That retrospective of the jewelry Lalique was making from the late 1880s until about 1905 was an amazing demonstration of the potential to turn natural forms into wearable art using little more than glass and metal. The imagination, elegance, and lifelike detail in Lalique's jewelry was a far cry from the mid-century enameling Freda had studied in college.

"Lalique was a naturalist, so I relate to him on many levels. The jewelry in that show was not only super rich, but the luster and how the glass was applied — there was something wonderful about that," Freda recalls. "Quality enamel work blows you away."

One of the first works that brought him to national attention was an exquisitely detailed enameled necklace of black rat snakes hatching from eggs, a piece begun in 1984 and finished in 2000. By then, he was on a mission. "Seeing those Lalique pieces, like the hornets climbing on the honeycomb? As a wildlife illustrator, I was like, what is *this*? But I was also thinking: you could never do this.

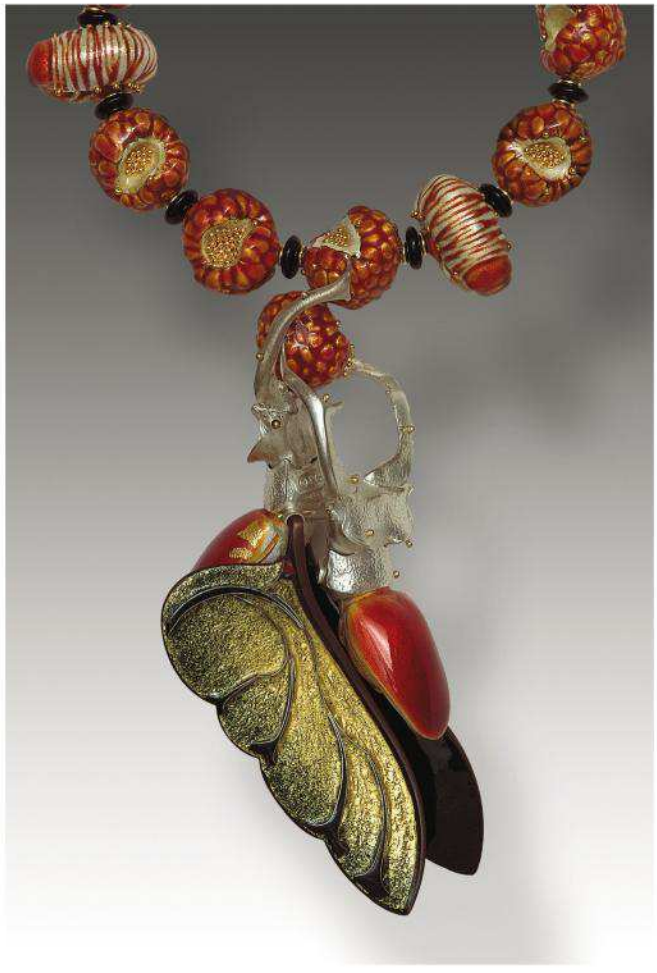
"Well, guess what? Now I'm working on a piece with life-size gold honeybees flying in and out of orchids," Freda says. "It's my interpretation of where Lalique left off."

For several years, Freda produced enameled orchids for Tiffany & Co., contemporary versions of the ones Paulding Farnham made famous at the turn of the century. Where Farnham took some liberties with the orchids, Freda approached them as a naturalist, making molds of actual orchids he grew himself. "I used to be a wildlife illustrator. Everything had to be on the money," he says.

He enameled these precious metal orchids in lifelike detail, each one unique. One of these, a *Spider Orchid* brooch, sold at Christie's in 2008 for $92,500. "It's kind of funny because the material at the time cost me about $500," Freda says.

Now, Freda is turning his attention to ambitious projects of his own — and at least one is an ode to Lalique. When he's not making jewelry, he's on his mountain bike near his home in California. "You've got to have a good life to make these happy pieces. They're so intense to make," he says. One piece can take up to four months, and he's been known to throw a few days' work in the acid bath and start over.

He usually casts late at night, saving the enameling for the morning. "Putting together the pieces is mundane, but the enameling — that's what it's all about. I do that during the day, when I'm fresh and the studio is filled with natural light so I can see the real colors. That's key."



**David Freda**
**Stag Beetle Necklace**
Enameled glass beads, fine silver, sterling silver, 24K and 18K yellow gold
PHOTO: COURTESY DAVID FREDA

**David Freda**
**Newborn White Sparrows Necklace**
Enamel, opals, fine silver, sterling silver, 24K and 18K yellow gold
PHOTO: COURTESY DAVID FREDA

**Wendy McAllister**
**Samba Brooch**
Vitreous enamel, copper, fine and oxidized sterling silver
PHOTO: HAP SAKWA PHOTOGRAPHY

## Wendy MacAllister

Wendy MacAllister was a ceramicist before she began to study jewelry making at the Maryland Institute of Art. Her ceramics involved floral forms with vivid, low-fire glazes fired at raku temperatures. When she finally added enamel to her metalwork, she took to it immediately. "Enamel is glass on metal, as opposed to glass on clay with ceramic glazes, so it felt very comfortable," she recalls.

She turned to enameling as a way to invest her pieces with color and texture. "Most cloisonné feels two-dimensional to me, like small paintings. That approach didn't attract me," she says. "I was looking for a way to accentuate form with color. I've thought about other ways to apply color but there's something about glass being melded with metal that feels intrinsically truer to me than just applying a skin of paint."

Wendy explores the geometry that lies beneath the organic forms in nature, both plant and sea life. "A lot of my work goes back and forth between the more obvious geometry and the more organic," she says, but believes the two are not exclusive. "When you look closely at flowers, you start seeing the symmetry and geometry beneath the surface."

"Geometry is always there in nature but plants are changed by what they encounter, whether it's light or drought or bugs," she says. "Something may start out with symmetry but it becomes asymmetrical. I always find that fascinating. Nothing is really perfect out there."

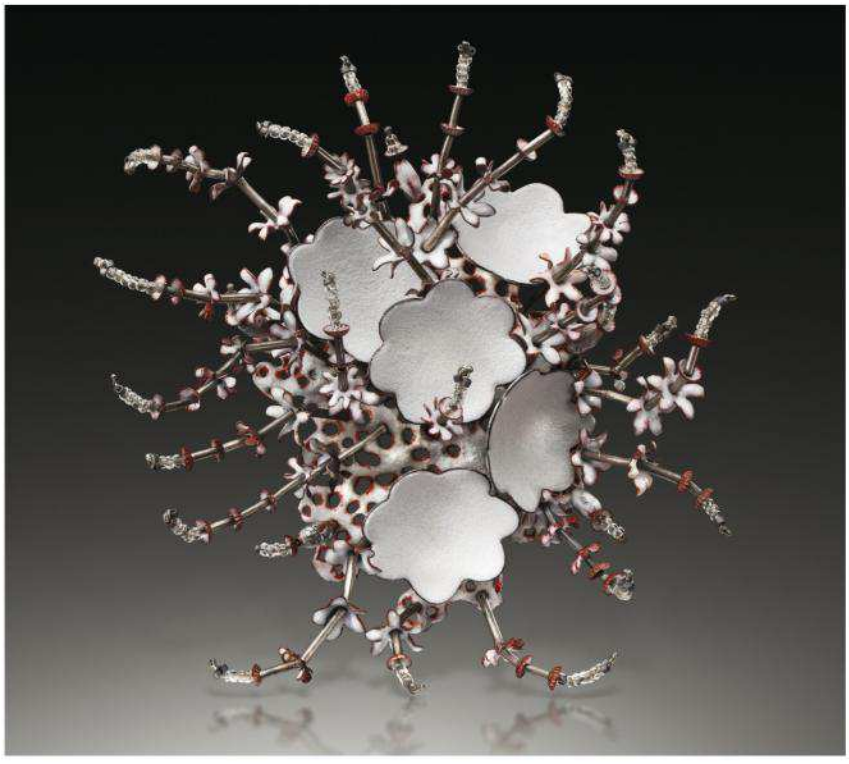
Most of Wendy's pieces are brooches, which she views as the purest sculptural form in jewelry. "With brooches, you don't see all the connections you see with necklaces or earrings. A brooch on a flat surface is just a sculpture." Hers are designed to wear as pendants too, but most are quite large. Her buyers tend to appreciate wearable art. Some collect them to display, not wear.

Yet Wendy's brooches actually come alive when worn, rife with branches and flowers that sway

*"I asked if there was some form of bok choy used for enameling. When she got done laughing, she said, 'You mean lily root. I'll send you some.'"*

**Wendy McAllister**
**White Shards Brooch**
Vitreous enamel, copper, sterling silver
PHOTO: VICTOR WOLANSKY PHOTOGRAPHY

**Wendy McAllister**
**Atoll Brooch**
Vitreous enamel, copper, sterling silver
PHOTO: HAP SAKWA PHOTOGRAPHY



**Wendy McAllister**
**Polar Vortex Brooch**
Vitreous enamel, copper, oxidized sterling silver, glass
PHOTO: VICTOR WOLANSKY PHOTOGRAPHY

and quiver in unexpected ways. She uses cold connections — "all sorts of different assemblage techniques with tabs and wires and rivets."

Vitreous enamel can be purchased in various grits and Wendy uses a variety, from fine powder to thin sheets of glass broken into shards. One of her collections involves smooth folded forms with jagged interiors. "I fire those pieces just long enough to attach the glass. If you touch that piece, it cuts you. I kind of like the idea of them being smooth on the outside but on the inside, dangerous."

She began *Polar Vortex* intending to create an underwater landscape. As a volunteer at the Baltimore Aquarium, she is around sea life all year long. "Winter was setting in and I was dreading it, so I was trying to make a nice, warm coral reef where I could go snorkeling. I was struggling with that piece until I looked out the window one day and saw the ground covered in snow and branches sticking up through it. I realized I was not making a coral reef, I was making the landscape outside my window."

Another piece she calls *Atoll* began as an experiment with some scrap pieces in her studio. She began riveting them together, cutting the edges with her saw. She ended up with a ring-like form, then added enamel shapes and built it up. "It was like a coral reef where plant life starts to take over, or rock forms where moss and plants grow. It just organically grew out of the shape supporting it. That's one of my favorite pieces and it was totally not preconceived.

"I find if I go with that process and don't force a piece to be what I sketched out ahead of time, I make more interesting work. Some of my best, most creative and magical pieces are ones that took me somewhere I didn't know I was going. That's the kind of process that's exciting to me and why I like doing what I do."

## Erica Druin

Erica Druin inherited her art form from her mother, accomplished enamel artist Marilyn Druin. Like Freda and MacAllister, Marilyn Druin developed her process largely by trial and error. In the final year of her life, she was collaborating with jewelry designer Michael Good on an exhibition scheduled to open at the Aaron Faber Gallery in New York City the spring of 2002. She died of cancer a few months before, leaving work unfinished.

Her daughter Erica had taken an interest in her mother's work the year before, and Marilyn had spent a few days training her in the studio. Erica completed a piece of cloisonné enamel under her mother's tutelage, taking notes madly, including her mother's instructions on how to enamel on three-dimensional pieces. She had never attempted to produce one herself, until Michael Good told her to try.

Marilyn had finished two enameled bird's nests with eggs for the show, and started a third. Good visited the studio, approved of Erica's experiments, and encouraged her to finish the third nest and a scalloped bowl her mother had begun. She went for it.

Her mother had told her that when she applied enamel to sculptural surfaces, she would need to add a special ingredient, a type

**Erica Druin, Marilyn Druin, Michael Good**
**Emerging Legacy**
Bowl: 24K gold cloisonné and basse-taille enamel on fine silver and 24k gold, formed in anticlastic technique; stand: 18K gold formed in anticlastic technique
PHOTO: COURTESY ERICA DRUIN

**Erica Druin, Marilyn Druin, Michael Good**
**Bird's Nest No. 3**
Eggs: 24K gold cloisonné and basse-taille enamel on fine silver and 24k gold; nest: 22K gold and bronze patinated leaves formed in anticlastic technique
PHOTO: COURTESY ERICA DRUIN

**Erica Druin**
**Celebration Pendant**
Hand-raised beads, 24K gold cloisonné and basse-taille enamel on fine silver and 24K gold on 18K gold suspension
PHOTO: COURTESY ERICA DRUIN

of Japanese vegetable. Erica had written in her notes: "Bok choy?" She tracked down her mother's supplier and called. "I asked if there was some form of bok choy used for enameling," she recalls. "When she got done laughing at me, she said, 'You mean lily root. I'll send you some.'"

A few months later, the show opened in NYC with a few pieces listed as three-way collaborations. Druin overheard two well-known enamellists admiring the bowl she had finished, talking about how technically difficult that was. "I thought, I'm so glad no one told me that before," she says. "If you don't know something is supposed to be hard, you just do it."

Good was pleased with the results and after the show told her, "If you find something else unfinished in the studio, just do it. Don't worry about ruining something. Play with it. Let's see what you come up with.'"

She is still working on her mother's unfinished pieces, but over the years, her own work has evolved into something more abstract and geometric. After taking a workshop at Arrowmont where she learned to apply cloisonné enamel to hand-raised beads, she developed a line of spherical enameled beads.

Palette and patterns on her beads are exquisite, sometimes with basse-taille texturing. One of her graduated-sphere necklaces won a design award from this magazine. She admits she still hasn't mastered metalsmithing but the beads require minimal mounting.

When you fire three-dimensional cloisonné, you have to apply wire and enamel to curved surfaces in way that allows them to adhere evenly in the kiln. "If I want the wire to curve in a certain direction, I have to curve it in that direction but also curve it to fit the surface of the piece it's sitting on," Druin says.

Building up the layers of color is trickiest in the early stages. Once you have a few layers covering the metal base, there's less chance of the cloisonné falling off. She works in sections, trying always to envision the whole. "With a bead, if I'm working on the top half, I still have to think about what I'm going to do with the bottom half, how it will all flow together."

The beads showcase Druin's own signature style: abstract patterns on three dimensions. "This may sound strange but I design as I go. When you've got gravity and heat, things tend to move. It works best if you don't have your heart set on having this wire in this exact spot. I figure, if a wire falls off, that wire wasn't meant to be there.

"I go with what the piece is telling me. But I'm a lot more fluid in my designs than someone working in a realistic style. With a portrait or an animal, a wire moving can mess up your entire piece."

---

**CATHLEEN MCCARTHY HAS** written for *Town & Country, Art & Antiques, The Washington Post* and her own site, TheJewelryLoupe.com.

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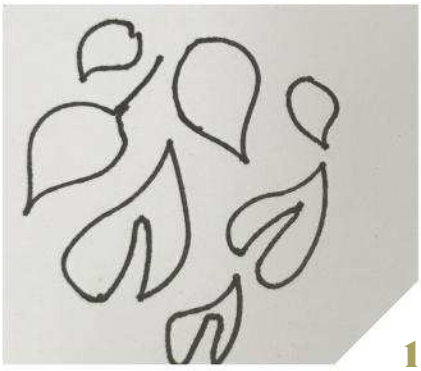
Conjure up the romance of the Arthurian legend with this flowery pendant **By Lexi Erickson**

# Guinevere's Lament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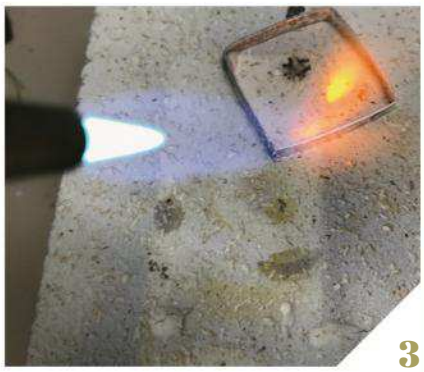
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I'm such a romantic. I close my eyes and again it's the end of summer turning into fall. I'm in the West Country of England, where the overburdened berry bushes along the tiny lanes weep with the heaviness of blackberries and late raspberries. In Cornwall, as we climb to Tintagel, the legendary birthplace of King Arthur, the herringbone pattern of ancient slate creates craggy ledges from which the autumn leaves tumble. The ghosts of late summer flowers remain. Oh, to be in England! This piece I dedicate to those memories.

**TIP!** *Square stones are very easy to set when they are as deep as this one.*

## LEAVES

1 Copy these leaves or draw your own with a Sharpie onto the silver and copper sheet. There is no set rule for how many leaves you need, what shape you need, or how many of copper or silver. Just cut some out and lay them in a pattern which pleases you. When you get them drawn onto the metal, cover the markings with clear cellophane tape. This keeps your fingers from rubbing off the Sharpie ink as you saw them out.

2 Using a ring holder to hold the tiny pieces makes filing them easier.

## BEZEL

Using flat nose pliers, fit the bezel around the square stone. This stone has a slight angle, and then a very steep angle onto a flat top. Covering the top angle would ruin the look of the stone by covering it up too much, so I am fitting the bezel only around the base of the stone. Square stones are very easy to set when they are as deep as this one. Measure the bezel and cut where necessary to form a 90-degree angle at each corner. Put this into the pickle to clean, rinse, and set aside. Hallmark the back place with your name and quality stamp.

3 Sweat solder a bit of medium solder on the back of each leaf. At the same time, put a piece of hard solder under the join of the bezel and solder it closed. Quench and pickle all the leaves and the bezel.

Cut a number of small lengths of wire, put them on the solder brick, and heat until they form a small ball. Let them cool, then pickle.

**Tip:** A small yogurt cup with holes drilled in the bottom will save you time trying to pick the balls out of the pickle with copper tongs.

OPENING PHOTO: JIM LAWSON; PROCESS PHOTOS: LEXI ERICKSON

# What You Need

**SKILLS**
Precise sawing
Soldering
Tiny tube setting
Patina application
Keum boo (optional)

**TIME IT TOOK**
About 2 hours

**MATERIALS**
- 1.25" inch square cab
- 1 approx. 2"x3" 20 g sterling sheet
- Sterling and copper scraps, 20-22 g
- 2 mm tube sets
- 5 inches 20 g sterling wire
- 3/16" x 22 g sterling bezel
- Small scraps of keum boo
- Hard and medium solder
- Easy wire solder rolled through the mill to flatten

**TOOLS**
**Hand:** Jeweler's saw, 4/0 saw blades, Burlife, 2mm stone setting bur, Wubbers medium bail making pliers, flat nose and chain nose pliers, AA tweezers, ring holder

**Layout:** Leaf patterns, ultra-fine tip Sharpie, cellophane tape, tiny scissors

**Soldering:** Soldering surface, torch with a large head, UltraFlux and brush, clean pickle and pickle pot, copper tongs, clean quench water, extra sharp solder pick

**Finishing:** Flex shaft, sharp steel awl, tube setting tool, needle files, #4 half round needle file, ultra-fine emery board, 3M white silicone knife edge wheel, small 3M texturing wheel, 3M Finishing film — 30 micron, soft brass brush, small #5 paint brush, green patina, liver of sulfur, keum boo, agate burnisher, Dawn detergent, ¼" wooden dowel

**SOURCES**
Cabochon available from Kevin O'Grady (www.kevinogrady.com). Special bezel wire from Santa Fe Jewelry Supply (www.sfjssantafe.com). Keum boo from Allcraft Tools (212-279-7077). Most of the other tools and materials for this project are available from well-stocked jewelry supply vendors, many of whom can be found in our Advertiser's Index, page 95.

4

5

6

*This is why I asked for clean quench water and pickle: if any of the little components fall off, you will want to be able to see them. If anything fell off, retrieve it from the pickle and solder it back on, and if not — congratulations!*

TIP!

## See More Work

THEIR TURN, PAGE 8

### FRAME WITH BERRIES AND DEW

4 Place the soldered bezel on top of the fluxed 20 g sheet. Cut small pallions of about 2mm easy solder and place around the inside of the bezel. Lay out all the leaves in a pleasing pattern, fluxing as you place the leaf. If you wish, bend some of the leaves with round nose pliers to create curled leaves. Cut tiny (about 1-2mm) pallions of easy solder and place those where you want the fluxed balls (berries) to be. Also cut tiny pallions to fit inside the fluxed 2mm tube sets. Place the tube sets where they will act like drops of dew on the leaves.

When you have a pleasing pattern of all of the elements, let the flux dry. This will keep everything from jumping around in chaos when you introduce the flame. That can be very irritating, as you probably know. You will be soldering everything down at once. If you have grouped the little balls close together, they will group themselves into soldered groups, so using your very sharp solder pick, place a few as groups of two or three around the bezel. Others can be singular.

Heat slowly with a large bushy flame kept about 4 inches from the piece. This will keep things from moving around drastically. If anything moves, move it back to place with the soldering pick. Heat the entire piece using a circular motion. Watch for the bright lines of solder around the balls and around the leaves. If you see them there, you will have them around the tube sets, though you may not see them.

When you have it all soldered, let it sit on your brick for a few minutes before quenching. After a couple of minutes, slowly put the piece into the quench water, and then the pickle. This is why I asked for clean quench water and pickle: if any of the little components fall off, you will want to be able to see them. If anything fell off, retrieve it from the pickle and solder it back on, and if not — *congratulations*!

5 Rinse the piece and scrub underwater with the soft brass brush and Dawn detergent. If something comes off with the scrubbing, don't despair. You would rather it come off now than later. Just go back to the solder station and solder it back on. Not a problem.

Saw away any excess back plate. You may leave a little lip around some leaves and not around some others. It's up to you, but file and sand the areas with a fine emery board. Don't leave any file marks showing on the piece.

### BAIL

6 You may make the bail of your choice, but I like an all-purpose "question mark" bail. Use a bit of extra from the 20 gauge sheet, and work it around the Wubbers bail making pliers to a pleasing

**TIP!**

***If you have to remove by sanding the patina off and applying again, that's OK. Sometimes I finish a piece two or three times!***


shape. It's nice to carry through the theme of the piece from the front to the back, so place curly wires or leaves as a part of the bezel. The back should always look as nice as the front.

File and sand the bail and solder it onto the back using easy solder.

After soldering, rinse and brush the piece with Dawn detergent one final time. File any rough or sharp areas with a small finishing #4 file, or use the white knife edged wheel.

If you want, you may use a texturing wheel (it looks like a round green kitchen scrubby) on a flex shaft. You may also keum boo several of the sterling leaves if you wish. You are the artist here. If you just want to create a patina, warm the piece in hot water, then apply liver of sulfur with a small paintbrush.

7

Brush with the Dawn detergent and the soft brass brush. The brush will remove the patina from the top of the piece, leaving the darkness of the patina in the recesses. If you have to remove by sanding the patina off and applying again, that's OK. Sometimes I finish a piece two or three times!

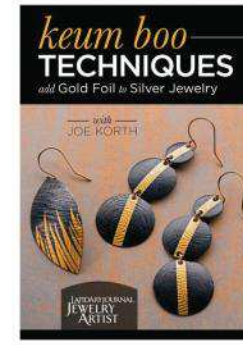
## SET THE STONES

7 Set the tiny 2mm stones in the tubes. This gives it just a bit of elegance, a hint of mystery of the sunshine sparkling on the morning dew. As an option, you may place tiny red cabs in the tubes to represent berries instead of white stones as dew.

Put the stone in the bezel and using a small wooden dowel, push the edges of the bezel over the slight angle of the stone. You now have an elegant piece of art, true art jewelry, and you should be very proud of yourself. Smile, it looks great on you!

**LEXI ERICKSON** is a Contributing Editor to *Lapidary Journal Jewelry Artist* and the Interweave Jewelry Blog. She is available for workshops and teaches private lessons in her home studio in Denver, Colorado, where she lives with her very patient family and two kissy Bichons, who sit in her lap as she writes. She can be reached at lexi@lexierickson.com.

## Keum Boo




Keum Boo Techniques: Add Gold Foil to Silver Jewelry (video)

Keum Boo Earrings (pdf project)

Kyanite & Keum Boo Pendant (pdf project)

Partial Bezel Set Channel Wood Pendant with Keum Boo (pdf project)

**www.interweave.com/jewelry**

*By Deborah Yonick, jewelry style expert*

**Columbia Gem House and Fair Trade Gems**
Montana Amethyst
PHOTO: COURTESY COLUMBIA GEM HOUSE AND FAIR TRADE GEMS

# Exotics Rising

## Designers tap a wide range of often lesser known gems based largely on color

THE BUZZ AT THIS YEAR'S TUCSON gem shows in early February was for a wide array of gemstones, most notably those gem families that come in many colors, especially garnet, tourmaline, and sapphire.

These gems and a host of other lesser-known but attractive exotic color stones, including agates and minerals typically of the collectors' market, are benefitting from the fact that gem quality ruby and blue sapphire have priced out the majority of jewelry buyers, cites market analyst Stuart Robertson for Gemworld International, gem-pricing guide, Glenview, Illinois. "The busiest booths in Tucson were selling non-classic gems and exotics."

More stone varieties are being featured by more jewelers and designers in a wider range of price points giving consumers greater choice today, notes Robertson. To underscore color's growing appeal in jewelry design, he points to trends in wedding rings that are showing more gemstones. "It's not at all unusual now to see a color stone as the primary gem in an engagement ring. We're even seeing more of a focus on color than the variety of stone used."

In fact, Eric Braunwart, president of Columbia Gem House and Fair Trade Gems in Vancouver, Washington, sees demand rising in the bridal category for gems that show inclusions. "The trend, especially among Millennials, is for material that looks more natural, organic, and interesting. They don't want perfection. They don't even call them inclusions. They care about where the gems come from and want assurances on what they're getting. While this does not represent the majority of the market, it is a growing percent."

## NON-TRADITIONAL

The most active buying segment of the colored stone market includes small galleries and studio artists working in gems and metals, and jewelry designers selling online, cites Robertson. He says young professionals operate many of these companies that are focused more on supply chain transparency than price, and have a strong social media presence to market their jewelry. "This group is connecting with millennials — a consumer class that traditional retail jewelers have been largely unable to tap."

Leading the charge are women who are making interesting gemstone jewelry that they heavily promote on Instagram, says Tom Cushman of Allerton Cushman, in Sun Valley, Idaho. Specializing in Madagascar gems, the buzz at his booth was for stones like liddicoatite tourmaline slices, high-quality rose quartz in buff top cabs, yellow moonstone, and a rare peach to hot pink hued beryl called pezzottaite. Cushman, who spends half the year in Madagascar, has direct ties to miners and dealers in the community for which he has given back — something he says is important to this young generation of buyers.

Braunwart says he has had more business for his Fair Trade Gems in the last year than the last decade he has been promoting them, with non-traditional retail jewelers seeking him out now because of his mine-to-market protocol.

Popular with designers are things like calibrated included ruby slices, canary tourmaline melee, and interesting rose cuts says Braunwart. He also reports American-sourced gems a strong niche, especially sapphires, amethyst, and smoky quartz from Montana, as well as Idaho garnet and Wyoming ruby.

Braunwart notes that it's not about heirloom for the younger generation; it's about the moment in jewelry that helps people express their personal story. He reminds us that color stones provide a lot of meaning for storytelling, not to mention the fashion connection.

Shopping the show, Los Angeles designer Gia Bahm for Unearthen.com says she started making jewelry because she couldn't find what she wanted to wear. Coming from a background in fashion styling, she started her line in 2007 that combines raw crystals with faceted gems set in a mix of metals. She says the histories, qualities, and if the materials are ethically sourced all matter to her when selecting her design elements. "I'm always looking for what's new and different." On her Tucson list this year were opals, royal blue kyanite, and metallic stones like carrollite, winchite, and lizardite in interesting cuts.

Bill Heher, a partner in Rare Earth Mining, a Trumbull, Connecticut-based gem house carrying over 300 stone varieties, says in the 45 years he has exhibited in Tucson this has been his best show yet, up 20% over 2017. He sold out of new blue opal from Indonesia. He also mentioned strong demand for hard-to-get material like Sleeping Beauty turquoise, landscape/picture gems, and natural surface stones like uvarovite garnet. He also reports larger manufacturers asking for new or hard-to-find materials, as they are relaxing their requirements for exactly calibrated and abundant more common stones.

> ***"The trend, especially among Millennials, is for material that looks more natural . . . They don't want perfection. . . . They care about where the gems come from and want assurances on what they're getting. While this does not represent the majority of the market, it is a growing percent."***

**Omi Gems**
Purple sapphire crystal
PHOTO: COURTESY OMI GEMS

3.23 demantoid garnet from the Green Dragon Mine in Namibia
PHOTO: COURTESY STEPHAN REIF

**Brenda Smith**
Ring
Goldsheen™ sapphire, sapphires, diamonds, gold
PHOTO: COURTESY BRENDA SMITH

**Columbia Gem House and Fair Trade Gems**
Ruby Slices
PHOTO: COURTESY COLUMBIA GEM HOUSE AND FAIR TRADE GEMS

**Columbia Gem House and Fair Trade Gems**
Fancy Color Montana Sapphires
PHOTO: COURTESY COLUMBIA GEM HOUSE AND FAIR TRADE GEMS

***"I'm in love with garnets these days . . . The garnets from Mahenge are my favorite because if you're lucky enough to find one over 10 carats, they're still sparkly and beautiful and have slight to drastically different colors . . . I'm especially crazy for demantoid melee from the Green Dragon mine — super sparkly, almost neon."***

## GARNETS RULE

Garnets are proving to be among the most popular gemstones designers are using today because of their high brilliancy, hardness, and color range. Robertson hails garnet's ability to be a brilliant color substitute for more expensive gems like ruby, emerald, and fancy color sapphires.

"I'm in love with garnets these days, for the past couple of years actually," says Los Angeles designer Erica Courtney. "The garnets from Mahenge are my favorite because if you're lucky enough to find one over 10 carats, they're still sparkly and beautiful and have slight to drastically different colors coming from the same origin (peachy-pink to deep reddish-pink with purple and orange tones). Tsavorites in rich green or Merelani mint garnets are just spectacular, and mandarins and demantoids are so bright and gorgeous! I'm especially crazy for demantoid melee from the Green Dragon mine — super sparkly, almost neon."

Based in Hong Kong for the Green Dragon Mine in Namibia, Stephan Reif describes demantoid of exceptional quality from this location as "disco material." "The Namibian demantoid compared to the well-known Russian material is lighter in color, but the dispersion is more evident. Due to the small crystal size and the abundance of inclusions in the rough, the majority of faceted gems are below a half carat. Stones over one carat are more difficult to find, over five carats rare. He says Green Dragon is the world's biggest and most researched demantoid deposit, producing a consistent supply of calibrated goods 1.5 mm and up, in colors from cognac over golden to various shades of green.

## SHADES OF TOURMALINE

Another Tucson favorite, Paraíba tourmaline, continues to captivate for its neon blues in faceted material, but New York gem dealer and designer Samuel Sylvio says Paraíba tourmaline in matrix slices are especially popular, as well as Paraíba in bold, naturally shaped crystals.

Most colors of tourmaline are trending, with Douglas Neves for the Cruzeiro Tourmaline Mine in Minas Gerais, Brazil, citing the blue-green shades of indicolite, red rubellite,

and bi- and multi-color tourmalines in high demand.

Besides garnets, Daniel Assaf of André Assaf: The Tsavorite Factory in New York sold beautiful tourmaline in blue, blue-green, and teal colors in smaller sizes from Namibia. "These nice colors used to be reserved for bigger stones, but we're getting them in smaller sizes." Other dealers mentioned strong sales of indicolite from Nigeria and bicolor tourmaline from Mozambique.

## FANCY SAPPHIRES

Blue sapphire remains the most popular gem on the market, with demand and supply good. But there's more excitement over fancy colors, with the buzz at the show for padparadscha sapphire. Everyone selling the gem in Tucson says buyers came looking for it, citing requests inspired by the engagement of Princess Eugenie of York with this special corundum that reflects a blend of red and yellow hues.

"I've never talked about padparadscha, one of my favorite obscure stones, as much as I did at the show," says Los Angeles designer Niveet Nagpal for Omi Gems, who credited the celebrity connection for expanding the conversation of all the colors sapphire comes in. So does Pantone, he adds, noting that the popularity of Ultra Violet, Color of the Year, bodes well for those excited to learn sapphire comes in purple shades. "We sold a lot of purple sapphire."

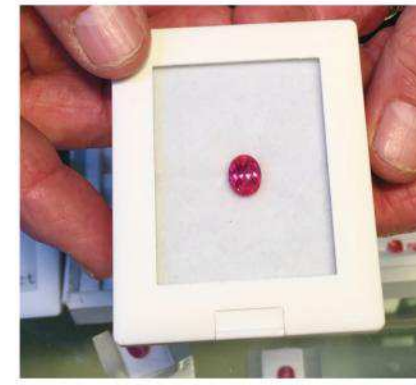
There also was chatter for sapphire known in the trade as gold or golden sheen, which entered the market from Kenya in 2009. It typically shows a metallic golden color with common variations being brass, copper, and bronze, but metallic blue, green, and yellow coloration is possible, says designer Brenda Smith. Based in Woodstock, Georgia, Smith is a U.S. distributor for loose stones from a large supplier of the material that trademarked it Goldsheen™, and has set these unusual sapphires in some of her latest designs.

**Samuel Sylvio**
Ring
Paraíba tourmaline, rubellite, diamonds, gold
PHOTO: COURTESY SAMUEL SYLVIO DESIGNS

**Samuel Sylvio**
Ring
Paraíba tourmaline, diamonds, platinum
PHOTO: COURTESY SAMUEL SYLVIO DESIGNS

**Samuel Sylvio**
Earrings
Rubellite, Paraíba tourmaline, pink tourmaline
PHOTO: COURTESY SAMUEL SYLVIO DESIGNS

An ammonite negative from Germany. The ammonite has left an impression on the pyrite matrix.
PHOTO: COURTESY RARE EARTH MINING



Pezzottaite, a rare hot pink beryl, was offered by Allerton Cushman in Tucson.
PHOTO: COURTESY ALLERTON CUSHMAN

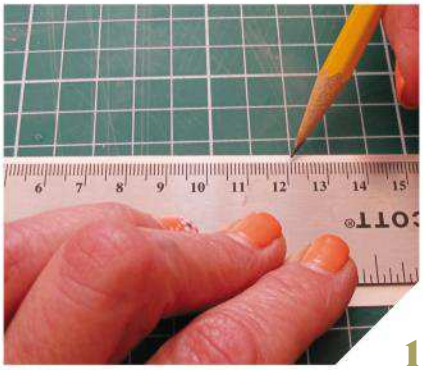
**Uvarovite Garnet**


***LAPIDARY JOURNAL JEWELRY ARTIST***
**JANUARY/FEBRUARY 2018**

**DEBORAH YONICK** has been writing about jewelry and fashion trends for more than 25 years for trade and consumer publications and online, and has loved both for much longer! With roots in New York, she presently lives and works in York, PA.

A Renaissance paper art adapted to silver jewelry through the modern medium of metal clay **By Arlene Mornick**

# Quilling Reborn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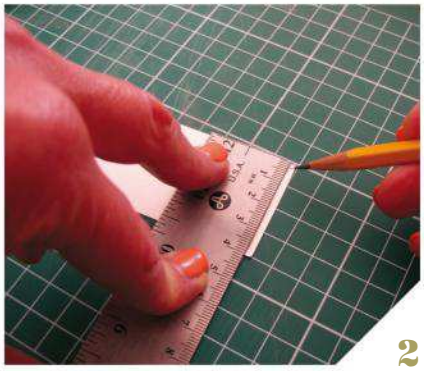
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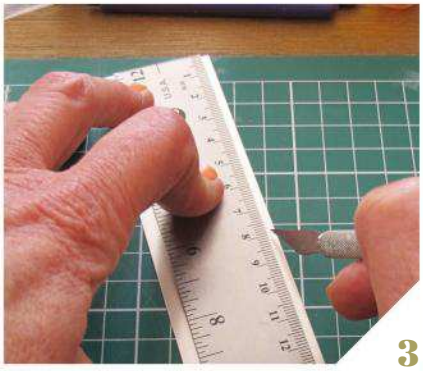
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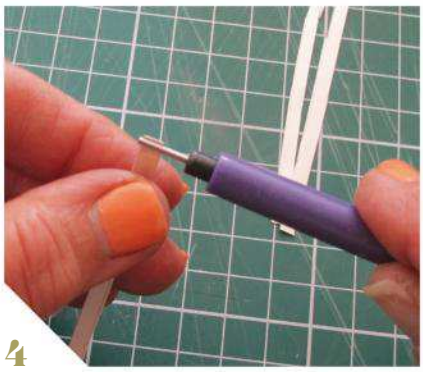
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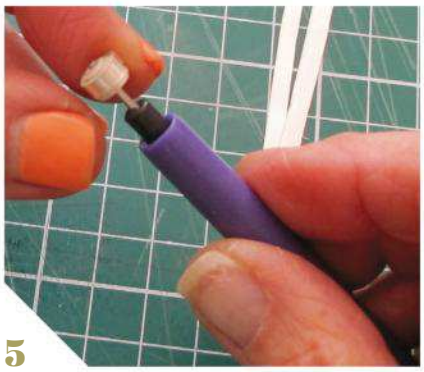
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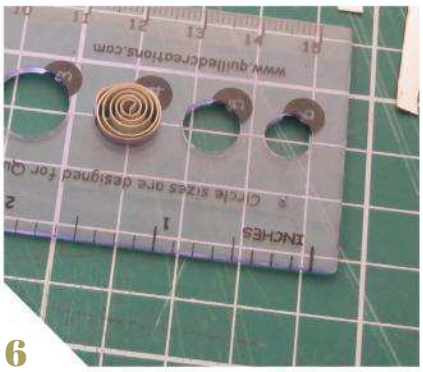

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The art of paper filigree known as quilling is an ancient technique used during the Renaissance to decorate book covers, cards, jewelry, and religious items. It involves the use of strips of paper that are rolled, looped, curled, and twisted to create individual shapes which are then attached to form elaborate designs.

This project demonstrates how to make quilled components out of Silver Metal Clay Paper Type, a unique composite of 99.9% fine silver clay metal formed into a paper-thin sheet. It remains soft during working time and requires no drying time. We'll roll, shape and fire strips of this clay and then attach them in a larger design using Silver Metal Clay Paste.

## QUILL THE COMPONENTS

**1–2** Measure and cut 4 strips of Silver Metal Clay Paper Type each 120 mm by 4 mm. Millimeters are the standard measurement used for sizing quilled components. Carefully measure the length and width of each strip.

**3** Lay a steel ruler on the Silver Clay Paper Type exposing only the width of the strip to be cut. The remainder is under the ruler, which will hold the sheet secure as the strip is cut away. Use a shape knife and cut the strip.

**4** Capture the end of a cut strip of Silver Clay Paper Type in the slotted quilling tool and roll a tight coil. Roll the quilling tool down and away from you.

**5–6** Secure the rolled strip with your finger, and while the strip is still on the coiling tool, place the tight coil inside the 11mm diameter circle template. Remove the quilling tool and allow the coil to unwind within the circle space.

OPENING PHOTO: JIM LAWSON; PROCESS PHOTOS: ARLENE MORNICK

## What You Need

**SKILLS**
Metal clay working

**TIME IT TOOK**
About 2 hours

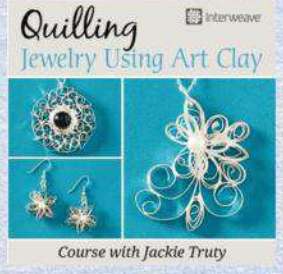
**MATERIALS**
- Silver Metal Clay Paper Type
- 5 grams Silver Metal Clay
- Silver Metal Clay Paste
- 2 4mm faceted cast in place stones
- Earring wires

**TOOLS**
**Quilling:** Cutting mat, steel ruler with cork backing, knife with sharp blade, quilling tool, two-sided sticky tape, circle template, tweezers

**Metal Clay:** Nonstick work surface, roller to flatten clay, playing cards or other thickness guides, 5mm inside diameter tube, 1.5mm inside diameter tube, brush, straight edge cutter, tweezers, snack roller, kiln

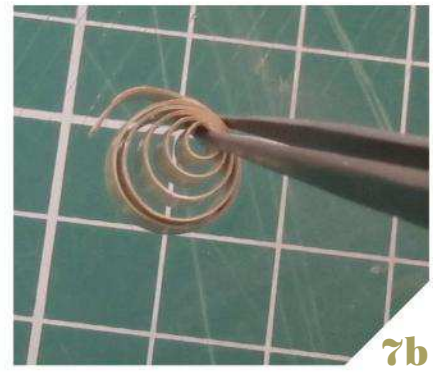
**SOURCES**
Most of the tools and materials for this project are available from well-stocked jewelry supply vendors, many of whom can be found in our Advertisers' Index, page 95.

## Learn Online




**Quilling Jewelry Using Art Clay with Jackie Truty (ecourse) www.Interweave.com/Jewelry**


7a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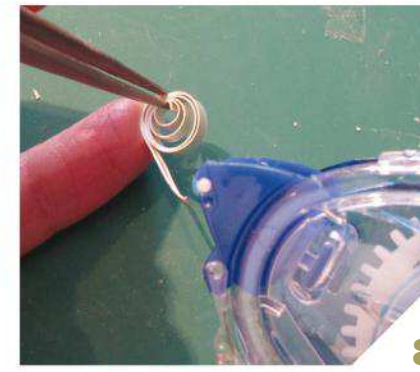
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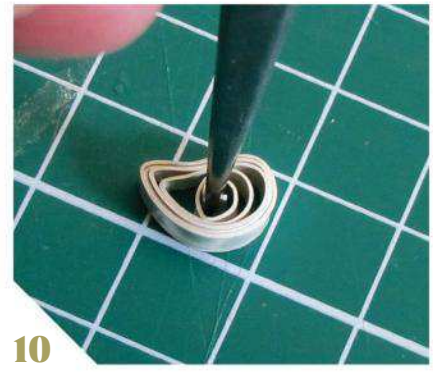
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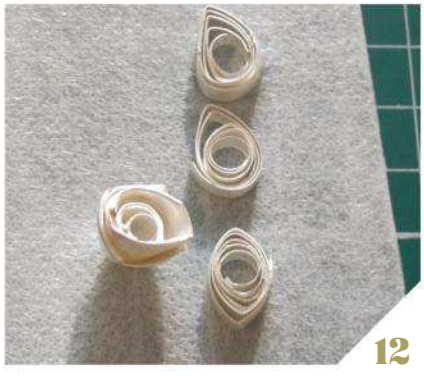
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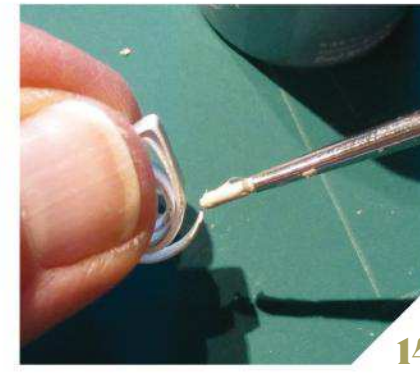
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**7a–b** Pick up the loose coil with a tweezers. Place one end of the tweezers on the coil's innermost ring and the other end on the outermost ring. Remove the coil from the circle template.

**8** Expose the loose end of the strip and apply two-sided sticky tape. The adhesive will burn off in the firing but helps hold everything together temporarily.

Repeat until you have four coils.

**9** After securing the loose ends of the rolled coils, create 4 bent teardrop shaped pieces out of strips measuring 120 mm x 4 mm and use a circle template 11 mm diameter.

See the box "More Shapes," page 61, for instructions on creating a variety of shapes.

**10** If your shapes need adjusting prior to firing, use your tweezers to secure the free end of the innermost part of the coil and rotate the tweezers to separate the rings. I suggest making only minor adjustments before firing; you can make final permanent adjustments afterwards.

## FIRE COMPONENTS

Fire the 4-bent teardrop shaped pieces to the manufacturer's recommended temperature. I place the pieces in a cold kiln and fire to 1470°F for 30 minutes. Pieces can be removed immediately from the kiln and allowed to cool outside it. Torch firing is not recommended for pieces created with the Paper Type product.

**11–12** Before firing, your coiled components might have looked pretty good, but firing may distort them. Shrinkage will be about 8% and this may open center of the coil.

**13** If you need to reshape, use tweezers or needle nose pliers

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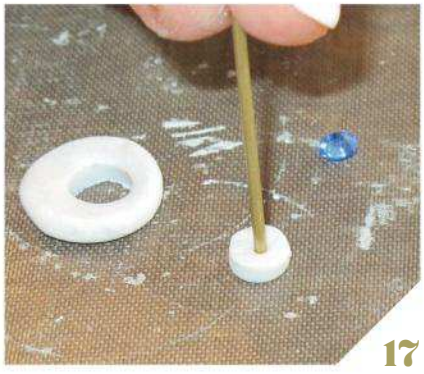


17

to secure the free end of the innermost ring, and rotate the tweezers to separate and reshape as needed. Working with fired Silver Paper Type feels similar to working with thin to medium gauge wire.

**14** The loose, outside end of the coil can be closed and secured by adding Silver Clay Paste to its inside edge and attaching it to the outside wall of the coil.

## STAND-ALONE SETTING

Each earring will consist of two bent teardrop shapes fit together at the pointy bend. We'll also add a 4 mm stone to each earring, making a stand-alone setting for each stone. You can fire this setting before or after adding to the design.

**15** Before setting a stone directly in metal clay, it is vital to know the depth required to accommodate the stone. Place the table of a 4mm round stone on your work surface (the stone will be upside-down with the culet pointing toward you). Roll 1 gram of clay into a ball and place it next to the stone. Use an acrylic or other smooth, flat-surfaced tool to press down and flatten the clay. Stop when the acrylic just touches the culet.

**16** The width of the clay setting must be a minimum of 2mm larger than the widest part of the stone. For a 4mm stone, use a 6mm (inside diameter) tube to cut the clay shape of the setting.

**17** Make room for the stone's culet. With a 1.5mm tube, cut all the way through the center of the wet clay setting.

## TIPS!

*Use millimeters to calculate measurements.*

*Do not use a water-based glue to adhere the loose end of a coil. Too much water can break down the consistency of Metal Clay Paper Type.*

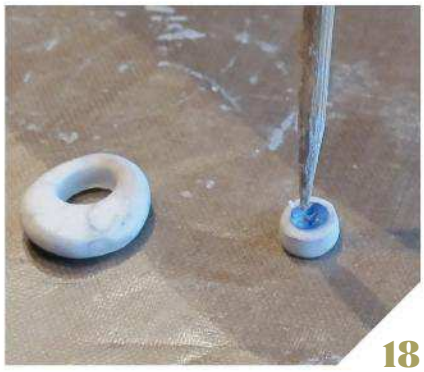
## More Shapes

ONCE YOU'VE CREATED YOUR COILS AND SECURED THE ENDS, YOU CAN MAKE A VARIETY OF SHAPES.

**MARQUIS:** Use your fingers to gently pinch both ends of the loosely rolled Paper type.

**TEARDROP:** Hold one end of the coil still and gently pinch the opposite end with your fingers.

**BENT TEARDROP:** Create a teardrop, then use your fingers to slightly bend the pointed top to one side.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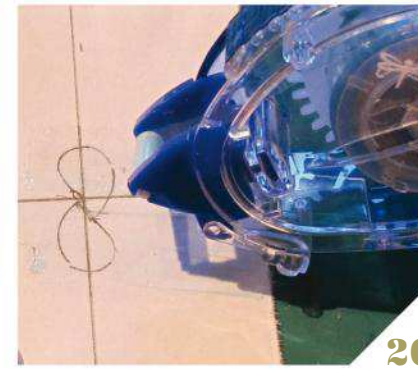
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26

**18** To set the stone, place it on the wet clay setting (culet in the hole) and use a bamboo stick to press the stone in. The girdle must be below the surface of the clay and its table flush with the surface. Dry the setting.

## ASSEMBLE

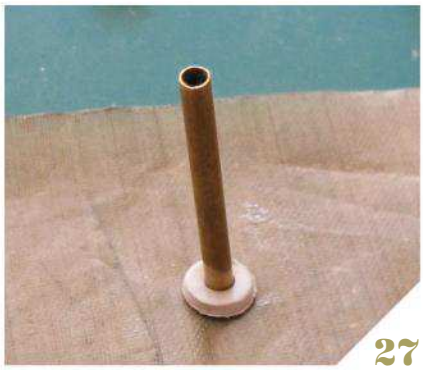
**19** Find the center of a 2″x 2″ piece of copy paper by drawing center horizontal and vertical lines. Using this as a straightness guide, lay out the earring design with two of the bent teardrop shapes. Trace the design with a pencil.

**20** After tracing the design, remove the teardrop shapes and place two-sided adhesive tape on the paper. Quilled components are very slim and delicate and connecting them can be tricky. The adhesive helps hold the pieces together while the Silver Clay Paste dries, especially useful for beginners.

**21** Place the top teardrop on the sticky tape in the proper design position. Add Silver Clay Paste to the second teardrop where it will attach to the first. The teardrops should be attached both to each other and the sticky paper.

The consistency of the paste is important. If the paste is too thick, it will look lumpy on the coil and may spill over into the inner coiled area rather than remaining on the connected sides. If the paste is too thin, it will puddle at the bottom of the connection. I suggest a consistency of a more liquid yogurt (thinner than a Greek style yogurt).

**22** Add Silver Clay Paste to the setting where it will attach to the components and attach them. Secure to the sticky paper. Allow the paste to dry.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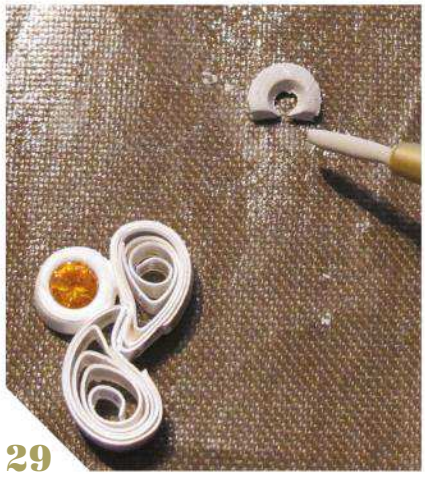
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**23** Create a mirror image earring using the remaining quilled pieces and another stand-alone setting. Follow the steps in Photos 19-22.

**24** Place the earrings attached to the copy paper on a kiln shelf and fire. The paper will disintegrate in the kiln. This time, the firing schedule is based on the manufacturer's recommended temperatures for the Silver Clay Paste.

**25** Once the earrings have cooled, turn them over and reinforce all of the joins on the back with Silver Clay Paste. Allow the paste to dry.

### EAR WIRE CONNECTOR

**26** Construct a metal clay earring wire connector for the top of each earring. Roll out 1 gram of silver metal clay to 1mm thickness (4 playing cards). Use a 5mm tube to cut out a disk.

**27** Use a 1.5mm tube to cut a hole in the center of the disk.

**28** Use a straight edge cutter to trim the disk across one end of the hole, leaving a horseshoe-shaped piece. Dry.

**29** Add paste to the bottom legs of the horseshoe and attach to the top of the earring.

**30** Repeat steps in Photos 26 through 29 for the second earring. Fire both earrings to the manufacturer's recommended firing schedule for Silver Metal Clay. Tumble or hand finish.

Add an earring wire to each connector. Wear and enjoy.

**ARLENE MORNICK** is a Master Instructor for Art Clay World and teaches in the San Francisco Bay area. She wants to open new doors and paths of expression for others. Her work can be viewed at www.lemordesigns.com, and she can be reached at arlenemornick@yahoo.com.

## Cutting Tips

- Keep the blade in your knife sharp.
- Make your cuts in 2 to 3 strokes. It is difficult to cut neatly when cutting a long strip all in one stroke.
- Use a metal ruler as a straightness guide for long strips of Metal Clay Paper Type. A sharp knife can chip a plastic ruler: after enough chips, you no longer have a straight edge as a guide.

## Firing Tips

- For quilled metal clay jewelry, there will be several firings. Individual quilled shapes are fired prior to use in a design. The original firing, which will sinter the Metal Clay Paper Type, starts in a cold kiln and fires longer than traditional bulk metal clay.
- Quilled design components are put together and constructed using silver Clay Paste and fired again. For this firing, use your standard metal clay firing schedule.

## See More Work

**THEIR TURN, PAGE 8**

Create a toggle set with a stone that works equally well as a secure finding and a decorative focal **By Kieu Pham Gray**

# Supporting Star


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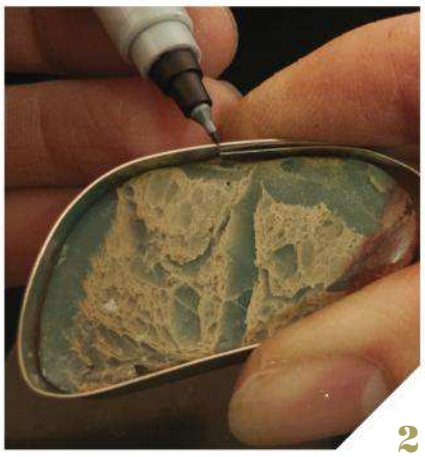
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Function or design, which comes first? I love design and function equally. And where I can, I like to make my designs functional. Why not kill two birds with one stone? Additionally, people think there is more value when you give them a two-fer, right? This is the fun part of creating, giving people more value and sometimes a little surprise.

The design in this piece lends itself well to a transparent stone or glass as it is open on both sides. There are several techniques in the project which can be used independently of each other to create more projects. In other words, you don't have to set a pearl into the toggle bar, you may leave it plain, or you could add a mini-bezel setting in its place. The stone can be anything, even a bead, especially if you cannot see the hole. That is what I am using here. Or consider using round or triangular wire to add a different dimension. The possibilities are endless.

## BEZEL

1 Measure the thickest part of your stone to determine the width of the 26g sheet. For the bezel strip, add 3-4 mm to the measurement. This will allow enough bezel for both sides of the stone.

Bend the 26g. fine silver sheet to wrap snuggly around the stone.

2 Mark the end and trim using ultra flush wire cutters. Depending on the accuracy of your cutting skills, you may want to allow a little extra metal for trimming. The seam should meet on the side of the stone, not in a corner or on a turn.

3 Work the ends of the seam until they meet and stay together on their own.

OPENING PHOTO: JIM LAWSON; PROCESS PHOTOS: KIEU PHAM GRAY

## What You Need

**SKILLS**
Soldering
Stone setting
Basic metalwork

**TIME IT TOOK**
3 hours

**MATERIALS**
- Flat semi-precious stone (Aqua Terra jasper/agate shown)
- 6"x ¼" 26g fine silver sheet (the width will depend on the thickness of the stone, length will depend on size of your stone)
- 6" 14g sterling silver square wire, dead soft
- 2 6mm 19g jump ring
- 1" 16g sterling silver wire, dead soft (may vary)
- 1 6mm half-round, half-drilled pearl
- 1x1" 12g copper sheet

**TOOLS**
**Soldering:** Butane torch, tripod with mesh, fire tweezers (cross-locking are best), soldering board of choice, solder paste (hard, medium, easy), flux, pickle

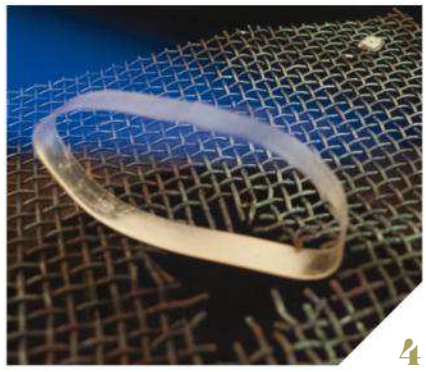
**Fabrication:** Metal files, curved burnisher, rotary tool, heavy duty wire cutters, ultra flush wire cutters, fine tip Sharpie, cardboard

**Stone Setting:** Bezel rocker, dressmaker's t-pin, E6000

**Finishing:** 400, 500, and 600 sandpaper; buffing wheel; polishing compound

**Optional Pearl Drilling:**
1" wood dowel rod, wood bead holder, diamond twist drill bit (see chart for size)

**SOURCES**
Most of the tools and materials for this project are available from well-stocked jewelry supply vendors, many of whom can be found in our Advertisers' Index, page 95.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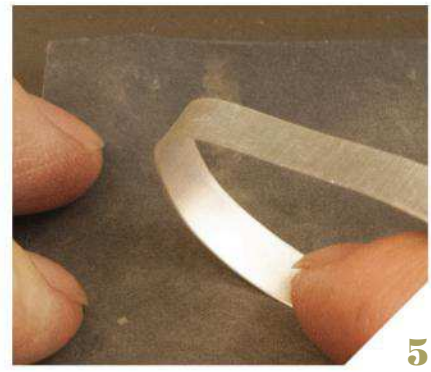
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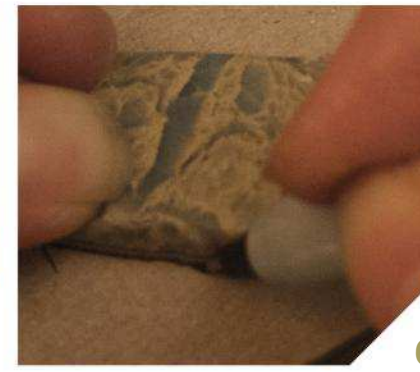
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***Depending on the accuracy of your cutting skills, you may want to allow a little extra metal for trimming. The seam should meet on the side of the stone, not in a corner or on a turn.***

**TIP!**


13


14

**4** Fuse the seam or solder using hard solder.

**5** Sand the seam until it is smooth and you cannot see the join.

**6–7** Use a fine tip Sharpie to trace the shape of the stone onto a piece of chipboard or cardstock. (I used the chipboard on the back of a notepad.) Be sure to trace as closely to the stone as possible.

**8–9** Trim the stencil with a pair of scissors on the inside of your tracing. Cut the pattern small enough to fit inside the bezel so that the bezel will not sit on top of the chipboard.

Cut 2-3 pieces of the chipboard.

**10–11** Place the bezel back around the stone and set on top of the pieces of chipboard. The chipboard will raise the stone so that the bezel will be evenly distributed on both sides of the stone. Press the bezel down towards the table until it is level.

**12–14** Working at a 45° angle, start setting the bezel with a bezel rocker until you have made it around the entire stone. At this stage we are simply starting the process. We will finish the setting later.

Remove the chipboard and stone from the bezel.

## TOGGLE RING

**15** Bend a piece of 14g sterling silver wire around a wood mandrel to create a curved shape big enough to allow a toggle bar to pass through. Trim the wire so that it is smaller than your bezel. Miter the ends to the shape of the bezel wire with a metal file to create a smooth transition.

**16** Place a piece of 12g copper sheet on your soldering surface to create elevation. Place the curved square wire on the copper sheet with ends hanging off the side for soldering. Solder to the bezel with medium solder.

Repeat the steps in Photos 15 and 16 to create a second, larger curve that will be soldered on the outside of first curve.

## TOGGLE BAR

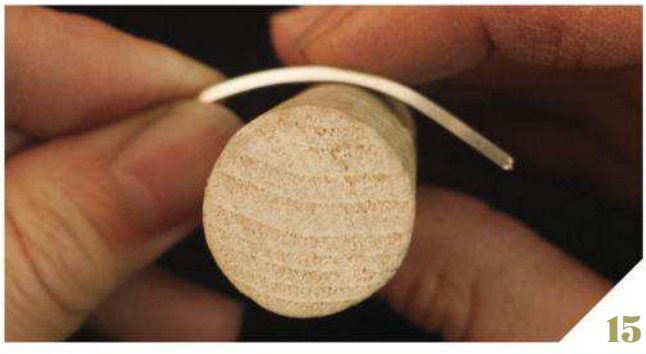
For the bar, cut a length of 14g square wire by measuring the width of your opening (inside the half circle) and adding approximately ¼".

**17** File the ends at a 60° angle and remove all sharp edges. Sand as needed. Bend the wire around a wood mandrel to create a curve.

**18** Cut a 6mm jump ring in half and solder with hard solder to the middle of the curved wire.

***Be deliberate while setting a stone, as you are work hardening the metal: the more you work the metal, the harder it will get, and the harder it will be to work out the kinks.***

**TIP!**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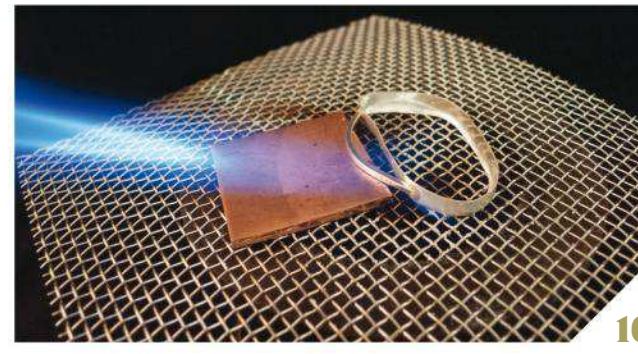
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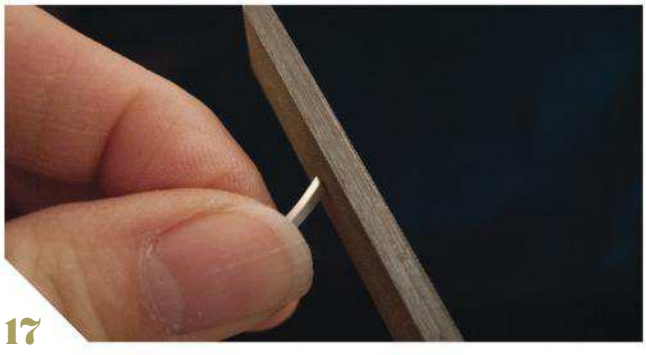
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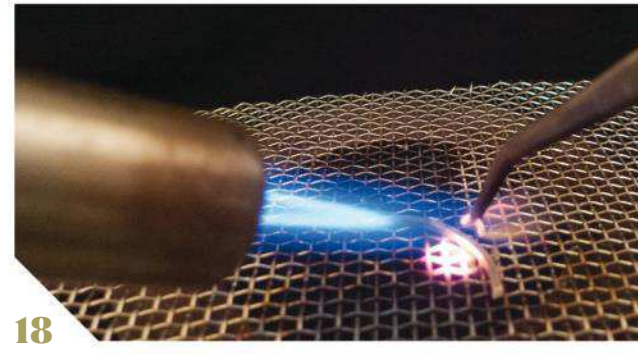
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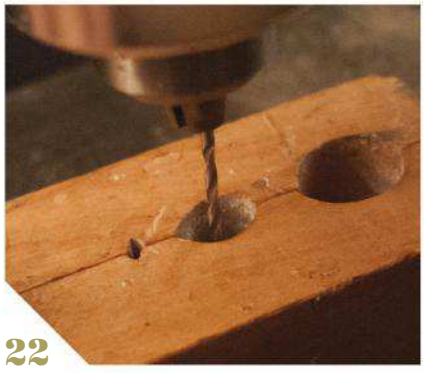
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23


24

**19–20** To make a pin for the pearl, solder a piece of 16g wire onto the opposite side of the jump ring using medium solder. Use a bowl of pumice for this step to allow the toggle bar to sit level.

Pickle, rinse and dry off.

**21–22** Drill a larger hole in your pearl as needed. (I prefer to have a larger wire for my pearl stud.) To make a larger hole, use a diamond-coated drill bit on a rotary tool and hold the pearl in a bead holder. To measure the depth of the hole, pierce the existing hole with a wire that fits inside until the wire can go no further. While the wire is inside the pearl, mark the wire and measure the length from the end to the mark. Transfer this measurement to your drill bit. This will give you a gauge for the depth of the hole. See the chart "Find the Right Drill Bit Size," below, to determine the drill bit size.

Using the depth measurement, trim the wire pin accordingly.

## Find the Right Drill Bit Size

| GAUGE | INCH | MM | DRILL |
|---|---|---|---|
| 14 | 0.064 | 1.63 | 51 |
| 16 | 0.051 | 1.3 | 54 |
| 18 | 0.04 | 1.02 | 56 |
| 20 | 0.032 | 0.812 | 65 |
| 22 | 0.025 | 0.635 | 70 |
| 24 | 0.02 | 0.508 | 74 |

### CONTINUE SETTING AND FINISH

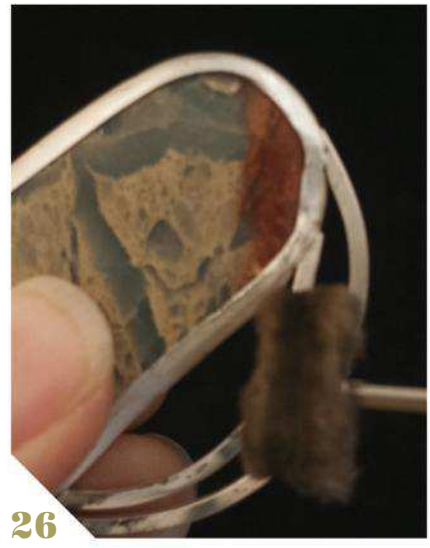
Place the stone back in the bezel unit, entering from the side that has not been set. Press the stone towards the workbench to ensure a snug fit. And repeat the steps in Photos 12-14, but without the chipboard.

**23–24** Make sure the stone is set evenly between the bezel wire by flipping the unit over and making adjustments as you fit. When the piece is mostly set, change the angle of your bezel rocker to 90 degrees and begin to work out the wrinkles. Continue this motion on both sides until you are happy with the results. Be deliberate while setting a stone, as you are work-hardening the

**TIP!**

***When the bezel is smooth to the stone, burnish the edge of the bezel wire with a curved burnisher on a soft surface. (I like to use the back of a mouse pad — yes, they still exist.)***

25



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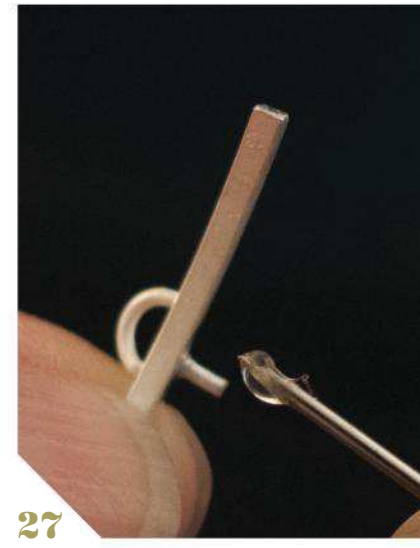

27

metal: the more you work the metal, the harder it will get, and the harder it will be to work out the kinks.

**25** When the bezel is smooth to the stone, burnish the edge of the bezel wire with a curved burnisher on a soft surface. (I like to use the back of a mouse pad — yes, they still exist.)

**26** Clean, sand, and polish all of the pieces. For a mirror shine, sand all silver surfaces starting with 400 grit sandpaper, switching to 500, then 600 when the surface is uniform to each grit, removing all scratches and gouges. Polish with a buffing wheel and polishing compound.

Wash in an ultrasonic cleaner or with a toothbrush and Dawn liquid soap to remove any remaining polish. Dry thoroughly, especially the toggle bar.

**27** Glue the pearl onto the stud on the toggle bar using E6000 and a pin to place the glue. Allow to dry overnight.

Connect a chain of choice.

**KIEU PHAM GRAY** has been creating jewelry for almost 20 years. Kieu and her husband, Andy, own and operate www.TheUrbanBeader.com, where they work to provide the industry with specialty supplies and tools. Most recently, she co-founded www.EverCrafting.com, a social media site for serial crafters.

## See More Work

**THEIR TURN, PAGE 8**

Make a brass and bronze bracelet featuring the battering ram ancestor with the hardest head **By Roger Halas**

# Prehistoric Winner


1


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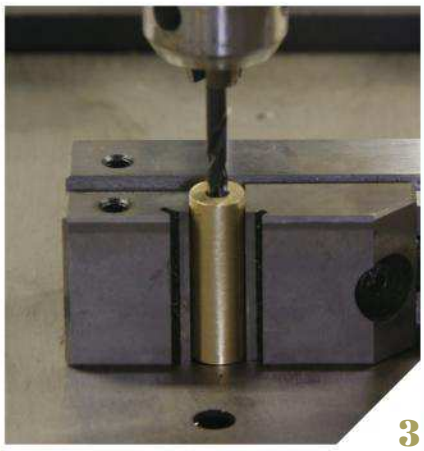
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4

Picture two male rams facing off in the mountains of Colorado. They rush each other, and we hear the resonating crack of their skulls slamming into each other at high speed. Turn the clock back 75 million years, and now the two combatants would be a pair of Pachycephalosaurs.

In this project, the dinosaur with the hardest skull will be the star of the show. Once we've applied the likeness as the centerpiece to a brass disc, we'll employ a simple method for making the sides of a bracelet, creating a wearable piece with minimal effort.

## PACHY SKULL CENTER

**1** A Pachycephalosaurus is known for its extremely hard skull. There are a number of ways of creating this on your 16 gauge metal. Personally, I make stamps that I use in a 20 ton press. However, this can also be engraved with a rotary tool or a reciprocating graver. It can also be acid- or photo-etched. Once you have the design, use a template to draw a 1¼ inch circle around it.

**2** Cut out the circle with your jeweler's saw. Then, you can either leave it flat, hammer a curve into it on an anvil, or dome it. I always think doming it looks fairly nice, like a concho or medallion.

**3** Using a small vise, set up a short length of ⅜ inch brass rod. Use a ¼ drill bit to core it.

**4** Once again, with your jeweler's saw, slice two pieces of the drilled rod about 3mm thick. Then cut these on the red lines. These tabs will be soldered to the center piece.

OPENING PHOTO: JIM LAWSON; PROCESS PHOTOS: ROGER HALAS

## What You Need

**SKILLS**
Basic metal fabrication
Chain making

**TIME IT TOOK**
About 4 hours

**MATERIALS**
- 16 gauge brass sheet
- 16 gauge bronze sheet
- ⅛- and ⅜-inch brass rod
- 14 gauge brass wire

**TOOLS**
Torch, jeweler's saw, Foredom or Dremel, files, pliers, 1/16-inch drill bit

**SOURCES**
Most of the tools and materials for this project are available from well-stocked jewelry supply vendors, many of whom can be found in our Advertisers' Index, page 95.


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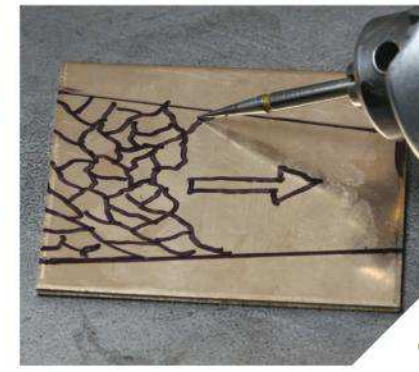
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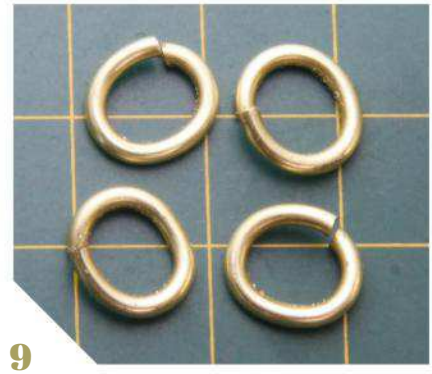
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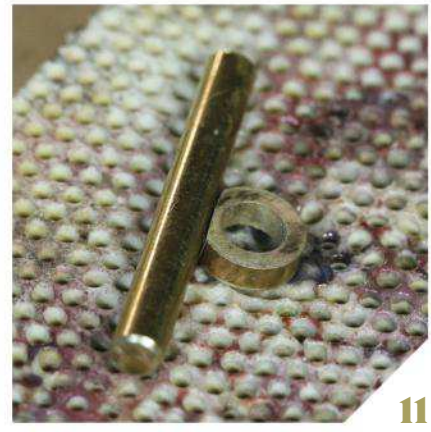
*I like to think of this as nimrod work, when I'm not feeling particularly creative but want to get something done that doesn't require much thought. Making components is a perfect way to accomplish something on those days.*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**5** Solder the two side tabs to the star attraction.

**6** Use a rounded punch to tap some texture into the surface of the skull medallion.

## CRACKED EARTH LINKS

**7** Take your 16 gauge bronze sheet and draw a tapered bracelet pattern on it, roughly 2 inches long. That's roughly a comfortable size for a bracelet component. Then draw a cracked earth pattern on it, and engrave it with a small bur.

**8** Drill two 1/16 inch holes on one side, and one on the other. And hammer a curve into these two side flanks using a bracelet mandrel or anvil.

**9** Using an 8mm rod or similar diameter drill bit, wrap some 14 gauge brass wire into a coil and cut some rings. You need 4. You can also squish them a little to make them oblong, for a different look.

## ASSEMBLY

**10** The components set up for assembly.

**11** Cut a length of ⅛ brass rod, about an inch long. Remember that section of rod you drilled? Cut another slice from that, file one side flat, and solder it to the ⅛ rod to make a toggle.

**12** If you make chain maille, this is very familiar to you. If not, the concept is simple. You need a rod, say, ¼ inch. Wrap 14 gauge around it, the more times the better.

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Then cut away. Each ring will fall loose, and you just keep cutting until you have a pile. I like to think of this as nimrod work, when I'm not feeling particularly creative but want to get something done that doesn't require much thought. Making components like this is a perfect way to accomplish something on those days when you just can't get those creative gears working. It happens to all of us, and this is an excellent solution.

**13** To make chain, all you need are two flat-nosed pliers. Twist out, link, twist in, done. Repeat.

**14** For the final step, connect the toggle to a jump ring. The other side requires a larger ring to accommodate the toggle. Since I work with a lathe, I machine pieces like this. If you don't, you can always solder a thicker donut with an appropriate diameter.

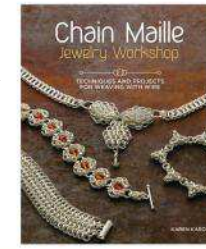
Also, you don't have to limit the chain to single links. You can double the links, or try some of the more complicated chain maille weaves or techniques.

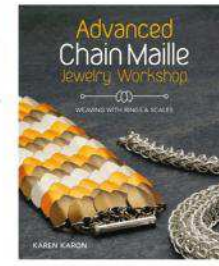
Remember, there are no limits to the creative process. Take it from the Pachycephalosaurus, whose hard head made it one tough animal that would never back down from a challenge. Take chances, try new techniques, and in the end it will make you a much better artist.

**ROGER HALAS** is a stone cutter, metalsmith, and jewelry designer who specializes in science fiction and fantasy themes. He also works in the film industry as a costume design consultant and prop maker. He can be reached at rhalas@jungleintrigue.com or through Facebook.

## More Links

*Chain Maille Jewelry Workshop* (book)




*Advanced Chain Maille Jewelry Workshop* (book)

**www.interweave.com/jewelry**

## More Fossils

**ANCIENT BEACH MEMENTO**
**PAGE 74**

## See More Work

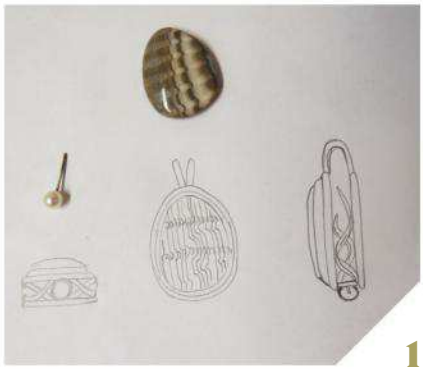
**THEIR TURN, PAGE 8**

Get those seashells out of that box and make something beautiful with them — like this fossil Anadara pendant! **By Jim Landon**

# Ancient Beach Memento

ONE COOL, MISTY summer morning a few years back, my wife Kerry and I were walking a southern Oregon beach at low tide. We started picking up pieces of a most interesting thick fossil shell that possessed intriguing patterns and colors. *That would make a cool lapidary material*, I thought ... then brought the pieces home, where they promptly disappeared into a box, another treasure waiting to be rediscovered. It would take a couple more chance encounters for that to happen, but it did.

Fast forward to February 2017 and the Tucson shows that draw people and every kind of rock, mineral, and fossil from all over the world.



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Wandering around the Rapa River Show, I saw jewelry with the very same kind of shell we'd collected on that Oregon beach. Dealer Bill Boss, from Northern California, had built a line he was calling the C'Mere Anadara Collection — *Anadara* being the genus of the Miocene age clam that had once produced those fossil shell pieces.

Later, Kerry and I were visiting a Yakima, Washington, gallery that was going to display some of her fiber art, and as usual, I headed to the jewelry section. On one of the shelves, my eyes fixed on a display of some of the most intricate, visually pleasing, and well-made earring and pendant pieces I had seen produced in our area. Lo and behold, I found out they had been made by Dennis Rose, a former student of mine at Selah High School, and when I later ran into him at one of our rock club meetings, we started talking.

The upshot of this encounter along with our beachcombing andTucson roaming is the pendant project here. I asked Bill if he would provide the shell for it, and Dennis if he would design and fabricate the jewelry, and they agreed. And if you want to shape fossil shell for jewelry yourself, see the sidebar "Shape a Shell Cabochon," page 78.

**TIP!** ***Dennis uses excess solder to make sure the pieces tack well, then suspends the pieces on a ceramic triangle commonly used for glazing pottery for soldering. Pretty cool idea. Flip the piece over to solder the bottom ring of the cage in place.***

## OCEAN THEME WITH BEZEL-SET SHELL

1 It's a good idea to sketch your design. Dennis drew a set of top and side views of his idea. Because he was using a seashell, he went for an ocean theme, incorporating a pearl as well as silver wire that would mimic sea grass.

2 To re-create this design, first measure and cut a strip of 28 gauge fine silver bezel, using the shell cab to determine the length needed. Use a Swanstrom super flush cutter or similar that will let you get the ends flat and avoid filing later to square them off.

OPENING PHOTO: JIM LAWSON; PROCESS PHOTOS: JIM LANDON

## What You Need

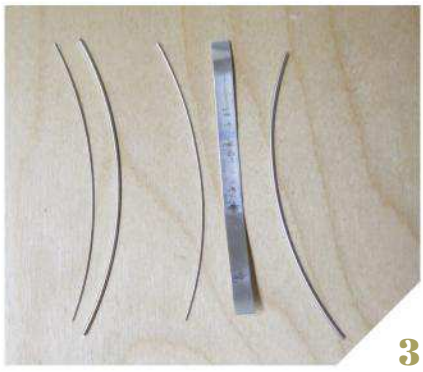
**TIME IT TOOK**
About 1 hour

**SKILLS**
Basic metalsmithing
Soldering
Stone setting

**MATERIALS**
- 28 gauge fine silver bezel
- 20 & 16 gauge round sterling wire
- Medium wire solder
- Rio Redi Flux
- Purex #2 Pickle
- 5 minute epoxy
- Drilled cultured pearl
- Anadara shell cabochon

**TOOLS**
**Hand:** Swanstrom super flush cutter, rawhide mallet, measuring caliper, pointed punch, cutting shears, dapping block, Peddinghaus goldsmith hammer, small jewelers anvil, files, burnishing tool
**Solder:** Oxygen/propane torch Ceramic pottery glazing soldering triangle Third hand soldering station
**Other:** Encore QCX Benchmate, Foredom Flex Shaft drill, 3M bristle discs (80, 220, 400, one micron)

**SOURCES**
Most of the tools and materials for this project are available from well-stocked jewelry supply vendors, many of whom can be found in our Advertisers' Index, page 95.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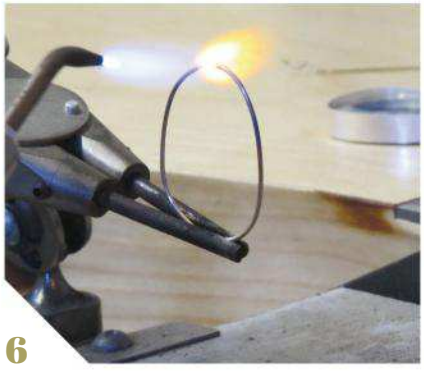
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**3** Measure and cut two pieces each of 20 and 16 gauge round sterling wire, again using the Swanstrom cutter if you have one.

**4** Check and recheck the bezel for a tight fit around the cabochon, then solder the ends together using medium wire solder and flux (Dennis uses Rio Redi Flux).

**5** After checking the soldered bezel once again, size one piece of 16 gauge wire to fit tightly inside the bezel. Flush-cut the ends to help ensure that there will be no gaps between the inside of the bezel and the wire loop.

**6** Solder the wire loop again using medium solder.

**Note:** You can use medium solder for every step in fabrication, and then pickle the whole thing after assembly.

**7** Check the soldered ring once again for a tight fit with the inside of the bezel.

**8** After tack soldering the 16 gauge wire ring to the inside of the bezel, solder using longer pieces of wire solder to guarantee a complete seal between the two pieces.

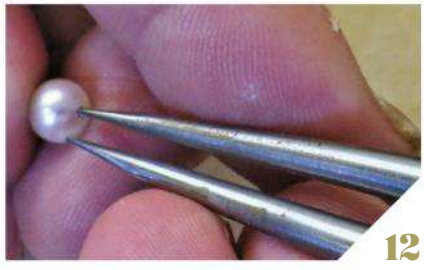
**9** Hammer flat using a rawhide mallet.

**10** Measure the second piece of 20 gauge wire to fit snugly inside the second ring and solder.

**11** Anneal the two pieces of 16 gauge wire. Fit one around the outside of the bezel on the same side as the piece of 20 gauge wire previously soldered. Measure and cut to length. Cut the second piece to the same length. Solder both. Solder the ring of 16 gauge wire to the outside of the bezel and the piece of 20 gauge wire to the inside of the ring of 16 gauge wire.

*You can use medium solder for every step in fabrication, and then pickle the whole thing after assembly.*

**TIP!**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## FABRICATE THE PEARL CUP

**12** Drill your pearl or start with a drilled one. Measure its radius with calipers, using the hole to anchor the caliper.

**13** Transfer this measurement to a scrap piece of 16 gauge sterling silver sheet to cut out the right sized disk.

**14** Dimple the center with a pointed punch, then drill a hole for the pearl peg.


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**15–16** Cut out the scribed circle with shears, and file the edge to the exact circumference.

**17** Select a hole on your dap block that closely matches the diameter of the pearl.

**18** Place the sterling disk in the proper hole and hammer to shape.

**19–20** Measure the peg to length and solder to the cup.

**21** The three main pieces that will form the pendant are now ready for assembly.


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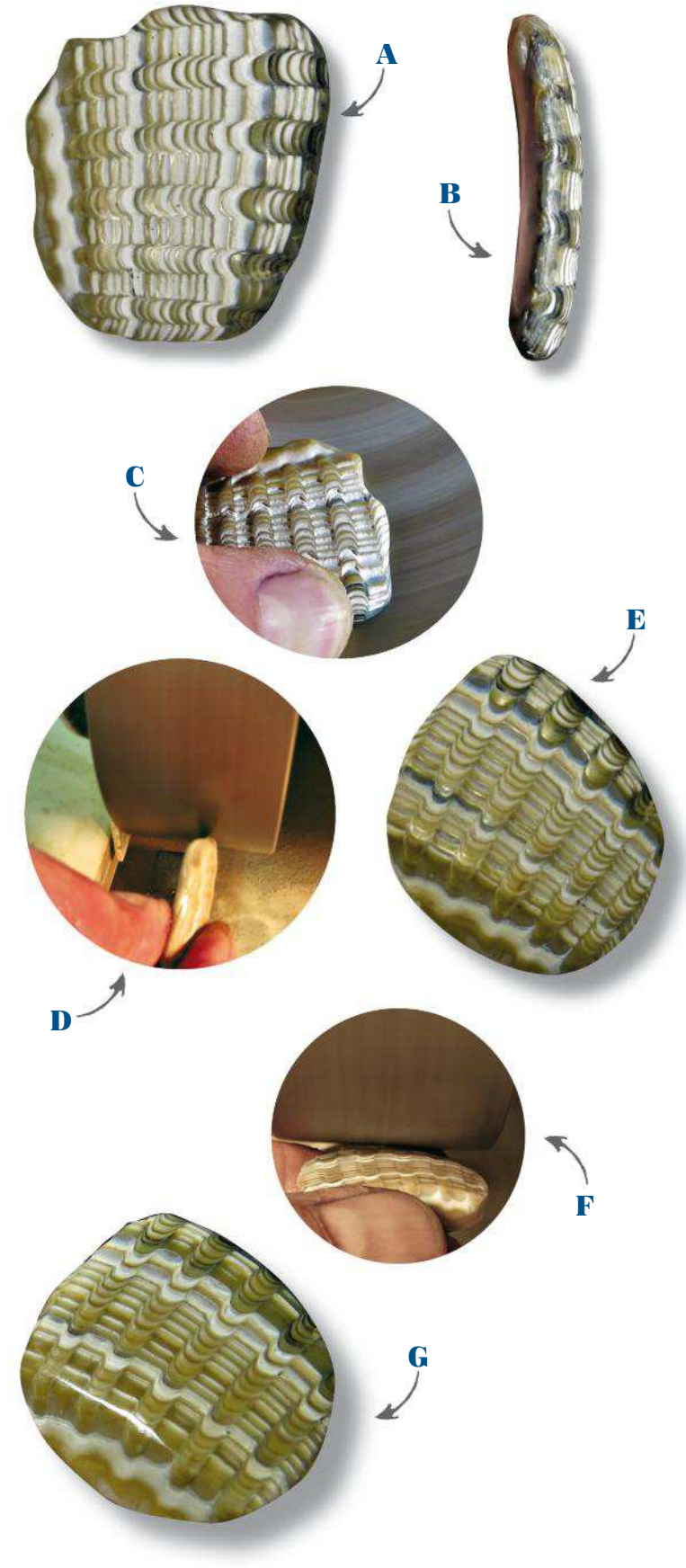
# Shape a Shell Cabochon

## Special considerations for the lapidary when cutting fossil shell




**A-B Determine the shape.** Anadara shell pieces as they come from the surf vary in shape, thickness, and "bowing" as seen on edge, and all three characteristics need to be factored in when deciding on the cab's shape. Additionally, consider the surface pattern and growth lines in orienting the cab, as in which is end would be up or down when set. If a shell piece is relatively thick, the concave back can be ground flat to make a cab easier to set. If long and narrow, this may not be possible as the girdle would be ground away before the desired flatness is obtained.

**C Grind the back flat.** For initial shaping, I work on the 80 grit Genie wheel, then then use a 120 grit diamond lap head on my flat lap. How flat you can get the back depends on the degree of bowing in the rough; you may not be able to grind the backs of larger pieces completely flat. When the back is as flat as you can get it, you will see how much you need to grind away to make the girdle.

**D Shape the girdle.** Shape the edges on an 80 grit diamond wheel; I use my Genie here. Even fossilized shell is not particularly hard, so use a light touch. The natural shape of these pieces does not lend itself well to producing a uniform girdle, as you could with a traditional cabochon of agate or jasper. Instead, plan to make a girdle of sufficient height so that a bezel can adequately grip the finished piece.

**E Check the final shape.** Once the back is flat and the girdle shaped, check the shape one more time before moving on to the face.

**F Textured or smooth face?** Most of the shell pieces that wash up on the beach have a somewhat rough surface. If you want to preserve this texture for the face-up cab, just polish the back and girdle. If you want a smooth face, then grind the surface down. I start with the 220 grit diamond wheel on my Genie and then progress through the 280, 600, 1200, and finally 14000 wheels. Again, take care as this material is rather soft and lots of it can be removed rather quickly. To finish the back, I start with the 280 grit wheel and go through 600 and finally 1200.

**G A finished cabochon, unless you want to retain the rough surface texture of a shell, should have a pleasing shape and be well polished.** The girdle does not need to have a uniform thickness as the bezel can be filed down to fit varying heights. This can really add to the unique qualities of finished pieces.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## THE SEA GRASS CAGE

**22** This design creates a cage that suggests sea grass to connect the two rings. Using the circumference of the cabochon as a guide, measure two pieces of 16 gauge wire, and cut to length. Center the pearl cup to determine where the two pieces of wire should be soldered.

**23** Solder the two 16 gauge wires, again using medium solder. Solder the pearl cup in place.

**24** Intertwine the wires, bend into shape, and hammer flat (Dennis uses a Peddinghaus goldsmith hammer).

**25** Shape the wires to width using parallel action pliers.

**26** File the ends of the wire cage to points.

**27** These three pieces of the pendant are now ready for final assembly.

**28** To assemble, first shape the cage to fit the inside of the bezel. The first solder points will be on either side of the pearl cup. Take care to assure that the pearl cup is centered on the bottom of the pendant. Solder.

**Tip:** Dennis uses excess solder here to make sure the pieces tack well, then suspends the pieces on a ceramic triangle commonly used for glazing pottery for soldering. Pretty cool idea. Flip the piece over to solder the bottom ring of the cage in place.


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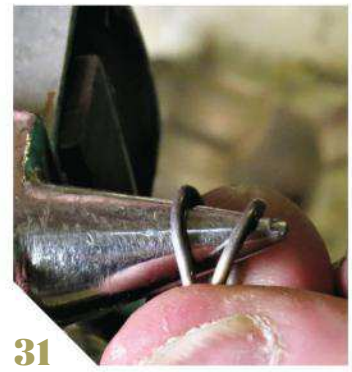
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## MAKE THE BAIL

**29** Cut two pieces of 16 gauge wire to the length you want for a bail, and solder the ends together.

**30** Determine where the bail should be centered using a steel ruler, and mark the spot.

**31** Shape the bail over the horn of a small anvil.

**32** Solder the bail to the pendant body, making sure it is centered.

**33** The shell cabochon for this piece did not have a uniform thickness, so once it was placed in the bezel the bezel edges needed to be filed down to a depth that would fit the cabochon.

**34** Use a bezel roller to push over the bezel and set the cabochon.

**35** Finish up the bezel using a burnishing tool.

## FINISH AND SET THE PEARL

**36** Once the entire piece has been assembled, pickle (Dennis uses Purex #2). File to remove excess solder. Clean and polish with a flex shaft using 3M bristle discs of progressive fineness, starting with 80 grit and progressing through 220, 400, pumice, and finally one micron.

**37** Set the pearl in its cup using two-part 5-minute epoxy. Clamp in place and allow to cure overnight.

**JIM LANDON** is a long-time high school science teacher, rockhound, and jewelry artist who lives in the foothills of the Cascade Mountains in Washington State.

Apply fusing techniques to sterling wire and sheet for unique designs with a signature look **By Linda Lurcott**

# Orchestrated Spontaneity

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I love jewelry making! And I love using techniques that produce organic-looking results. My first torch was so hot (too hot, actually) that it gave me organic results alright — usually by melting! Fortunately, when I joined the Pennsylvania Society of Goldsmiths, I had the opportunity to learn from internationally known master instructors. (Thank you, Lexi Erickson, for inviting me to join and for finding the best workshop instructors.)

My previous melting experiences really prepared me for taking a workshop on fusing sterling with Marne Ryan because I learned what sterling would look like just prior to a total meltdown. Also, I had finally acquired the appropriate torch with multiple sized tips and a better sense of flame control. Thank goodness!

Not only did Marne graciously share her fusing technique and show us such great organic textures and patinas, she also reminded us of our humanness when she'd tell us to take breaths to lessen anxiety. It was good advice. She also offered us visual imagery, such as "sweep the flame across the metal like a paint brush." As I began to experiment using a variation in gauges and torch tips and temperature, I gained confidence and became very inspired to explore more.

As I applied my own muse, I was able to create my own designs utilizing Marne's process. I love to design texture with both spontaneity and orchestrated technique. In my studio I applied what I had learned using the materials I had on hand: a lot of wire!

## PREPARE AND MAKE THE SPIRALS

1 Clean all the metal with sandpaper and/or a pot scrubber, sanding over both sides of the sterling sheet and all sides of the rectangular sterling wire. Try not to touch any metal surface with your fingers or hands, as oil from your skin can inhibit the fusing process.

At your workspace, spray front and back surfaces of clean sterling sheet with self-pickling flux. Hold the sterling sheet by the edges and place on top of a steel wire-wrapped and dampened charcoal block.

2 Use round needle nose pliers, and beginning with the largest gauge wire (15g rolled to 21g), form spirals from the radial axis of the wire — meaning go with the curve of the roll of the wire. This gives depth.

I like to have two spirals facing each other with rounded edges touching, sort of like an upside down, lopsided heart. Vary the tail end of each spiral to preference: create long tails with curled ends, slightly curve an arch, or whatever suits you. When creating and placing wire spirals, I use the largest gauged wire (15g rolled to 21g) for all outer edges.

File the tail end flush. Use flat nose pliers to straighten any distortion so that the spiral lies flat on the sterling sheet. Once flat, sand the bottom portion and place upon the fluxed sterling sheet surface. The larger gauge creates a nice sturdy outer framework. Using tweezers, lay each spiral on the sterling sheet so that the ends and spiral sides touch another wire. This helps to create stability.

OPENING PHOTO: JIM LAWSON; PROCESS PHOTOS: LINDA LURCOTT

## What You Need

**SKILLS**
Torch use
Soldering
Sawing
Rolling mill use

**TIME IT TOOK**
About 2 hours

**MATERIALS**
- Sterling silver sheet 28 gauge ½" by 6"; 1 strip
- Sterling silver wire 15g, rolled to 21 g; 3 to 5 feet
- Sterling silver wire 17g, rolled to 21g; 2 to 3 feet
- Sterling silver jump rings (3.2mm 18g square wire)
- Hard, medium, and easy silver solder

**TOOLS**
**Hand:** Sandpaper 400 grit and 600 grit, green scrub pad, wire cutters or Joyce Chen scissors, hand file #2 cut, needle file set (various shapes), jewelers saw, saw blades 4/0 cut, round nose pliers or bail making pliers, flat nose pliers, bench pin, safety glasses, dust mask or respirator

**Fusing:** Smith torch with tips 1, 0, or 00; striker; self-pickling flux like Battons or MY-T-Flux from Rio Grande (can dilute with water); spray bottler (for flux); large rectangular charcoal block (wrapped on narrow edges with twisted wire); fire brick; solder pick; copper tongs (to remove sterling from pickle pot); bowl with water for quenching; pickle pot (crock pot); pickle solution (PH swimming pool cleaning agent); third hand with cross locking tweezers; insulated cross locking tweezers

**Rolling:** Rolling mill, paper napkin

**Filing And Polishing:** Flex shaft; 3m abrasive tip (red narrow bullet is medium grit; fits on threaded mandrel); 3M abrasive disk (black flat edge and knife edge medium-high grit); 3M abrasive radial spiral disk ("spider leg;" use 3 on mandrel together held on with a tiny screw); small screwdriver; mandrels to fit each tip; felt-coated polishing stick; Tripoli polishing compound (or your preference); polishing papers; polishing cloth; rotary or vibratory tumbler; 1-2 pounds mixed shapes stainless steel shot; steel curved burnisher

**Finishing:** Liver of sulfur, glass bowl or jar, plastic disposable spoon, dish soap, old soft toothbrush, brass brush (soft), fine metal cleaner diluted according to label (Sunsheen for gold and silver)

**SOURCES**
For fusing sterling silver, I prefer to purchase my metal from T.B. Hagstoz in Philadelphia, PA. Also for fusing, I prefer to purchase my charcoal block from Allcraft in NYC. Most of the tools and materials for this project are available from well-stocked jewelry supply vendors, many of whom can be found in our Advertisers' Index, page 95.

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3 Fill in negative spaces with curved arches from any chosen gauge. File the ends flush and place so that each edge touches another wire. Spray again with flux. Continue until the strip is filled and designed to your satisfaction.

## FUSE AND ROLL

4 With the charcoal block at your soldering station (I place the charcoal block on top of my fire brick), respray the sterling sheet and wires with flux. Attach a size 1 torch tip. Safely ignite your torch with the striker and hold the torch handle in your non-dominant hand. Use your dominant hand to hold your soldering pick. With a large yet soft flame, begin to heat the entire piece, working in a circular motion. If any wire pieces move due to the heat force, gently nudge them back into place with your soldering pick. Raise and lower the flame appropriately to encourage fusing and avoid melting.

As fusing begins, notice the fine silver begin to flow. Lift the torch and use the flame as a paint brush, gently gliding the flame over the wire designs to ensure fusing. Also, gently touch the tops of the wire framed spirals with a solder pick to again ensure contact. When the area of the sheet glows red, immediately remove the flame and press the pieces down with the soldering pick. Turn off the torch.

Allow to air cool and turn the piece over with your tweezers or insulated cross-locking tweezers. Look at the back of the piece and make sure it looks embossed. If any areas do not have an embossed look, quench, pickle, rinse and thoroughly clean the metal before repeating this proess, including refluxing. Repeat until the embossed look appears along the entire back of the piece.

5 Once the embossing is clear and the piece is clean and dry, wrap it in a paper towel or paper napkin. Open the rolling mill cylinders until the wrapped piece just fits in the opening. Gently roll the piece through to slightly compress it. To keep the piece straight, flip it around and roll from the opposite end. Again, gently roll through the mill cylinders to slightly compress. Now, remove the paper wrapping and examine for desired compression and contact. If you see any loose pieces, sand the edges and thoroughly clean the sheet and the wire with warm soapy water and a brass brush. Rinse, sand, flux, and try to fuse again.

## SAW AND ADD DESIGN ELEMENTS

6 Once the piece is clean, divide the sheet into sections which look most appealing for jewelry elements. I mark the element with a black Sharpie. Use a jeweler's saw with a lubricated 4/0 saw blade to cut the elements apart. If you prefer, you can also use Joyce Chen scissors and cut apart the design elements. Always wear your safety glasses when cutting metal. Remember, cutting distorts the metal. Use flat


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nose pliers to straighten or "true up" the element.

Using a hand file and bench pin, firmly hold your piece and file the edges smooth.

**7** I saved the tiny scraps from sawing and made sterling balls of even sizes. Cut several (5) ¼" or shorter pieces of 20g round sterling wire with wire cutters or scissors. Place the sterling pieces on your charcoal block. Ignite your torch and aim the flame directly to each piece. Notice that they will form into small balls. Also, the flat block will provide a flat back, good for soldering later. Cool, quench, pickle, and rinse. Set aside.

**8** Create an arch with the 15g or 17g wire or regular 18g square sterling wire for a custom fit bail for each piece that will be a pendant or a small arch if for an earring. Choose the appropriate gauge by holding each gauge side by side with the pendant. Then use round nose pliers to form. File each end to fit either the sides of the pendant pieces or the tops for earrings. Sand, flux, and solder (hard solder) the formed wire in place. Quench, pickle, and rinse.

**9** Sand the bottom of each sterling silver ball. Set aside, preferably in a glass container. Choose the placement of each sterling ball on your pendant. Then sand and flux both the pendant and the flat side of the balls. Apply small snippets of medium solder to the chosen areas and place a ball on top of each snippet. (If soldering on the outside edge, you may want to use a third hand with a cross locking tweezers.) Solder, quench, pickle, and rinse. Dry thoroughly before the next step.

**10** Use your file, abrasive tips with flex shaft, or sanding papers to smooth all edges and exposed surfaces. Wear safety glasses and your choice of dusk mask or respirator when operating your flex shaft with abrasive tips. Tiny pieces of either metal or abrasive material can irritate eyes, and abrasive compounds can be toxic to your respiratory system.

**11** Next, I like to use one or two jump rings (3.2 mm 18 gauge square wire) for the bail and chain connection. I also attach the chain at this point. I like a sterling silver round rolo chain, approximately 2.1 mm. You can vary the sizes according to your preference and size of pendant.

**Tip:** Before soldering the jump ring closed, make sure the jump ring's inside diameter is large enough for the chain to freely move through the opening.

With flat nose pliers, open each jump ring and then sand both ends. Thread the jump rings through the opening of your pendant and lay the chain inside the opening as well (optional). Close the jump ring and place in third hand cross locking tweezers. (If using two jump rings,

12

13

solder one at a time.) Next, change the torch tip to size 0 to prevent overheating the jump ring. Flux and place a small snippet of easy solder in between the jump ring ends only, so that only the jump ring gets soldered. Solder, quench, pickle, and rinse. Repeat if using a second jump ring. When the jump rings are clean and dry, smooth the surfaces with files, abrasives, or sanding papers. For earrings, add an ear wire to the bail.

## ADD PATINA AND FINISH

**12** In a well-ventilated area or outside, mix a batch of patina in a glass bowl or jar. Use a pea-sized piece of dry liver of sulfur or a drop of liquid liver of sulfur in hot water. Stir with a disposable plastic spoon to dissolve. Next, drop the entire piece into the patina and gently stir to coat all surfaces. When darkened to your preference, rinse and allow to air dry.

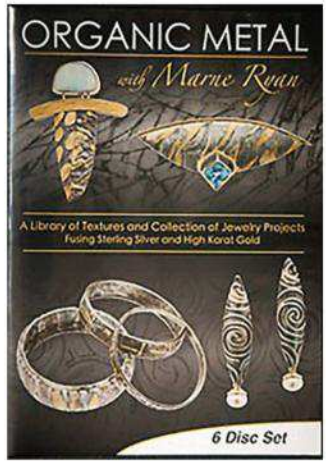
Buff the highlights with a polishing stick and a bit of buffing compound like White Tripoli. I simply run the chain through a polishing cloth. If you satisfied with the patina and highlights, you can stop here.

**13** For a really nice shine, place the entire pendant — including the chain — in a rotary tumbler filled with 1-2 pounds of stainless steel shot and sterling silver cleaning solvent. For an added touch of shine, use a hand-held steel burnisher to burnish the edges and non-patina surfaces.

The nice thing about this project is that the fused result can provide multiple jewelry elements with great texture and an organic look before applying any soldering operations. I feel this technique provides the maker with a "serendipitous production" experience. From the fusing technique, I created five pendants and one pair of earrings. Feel free to use your own muse to create various fused patterns and textures in a variety of shapes and gauges. Most importantly, have fun and remember to breathe!

I extend a very special thank you to master goldsmith Marne Ryan for her permission to author an article with a variation on her fusing technique.

## More Metalwork with Marne Ryan



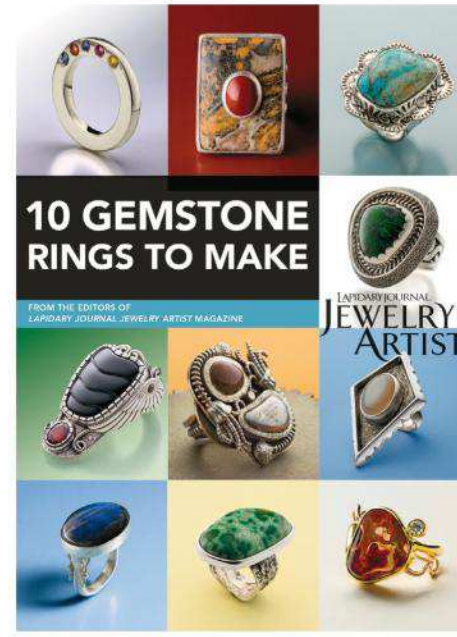

*Organic Metal with Marne Ryan* (DVD set)

**www.interweave.com/jewelry**

**LINDA LURCOTT** has been a lifelong "maker" and has enjoyed metalsmithing for two decades. It's in her blood: her great-grandparents owned and operated a jewelry store in NYC with her great-uncle, the metalsmith. Linda has served as a board member of Pennsylvania Society of Metalsmiths, where she had the good fortune to have studied with several master metalsmiths. She enjoys sharing her passion with classes, workshops, and articles, and can be reached at linda@lindalurcott.com.

# Facets

news & product innovations




## 10 Gemstone Rings to Make

Rings are some of the most popular jewelry pieces to make and to wear. The editors of *Lapidary Journal Jewelry Artist* have pulled together this digital compilation of some of the best ring projects from the pages of this magazine as well as *Step by Step Wire Jewelry*. The projects in this e-book all feature interesting stones set in innovative ring designs from some of our favorite contributors — Helen Driggs, John F. Heusler, Roger Halas, and more. You can recreate the rings as presented or use them as inspiration for your own ring designs. Available soon.

**More at www.interweave.com/jewelry**


## Halstead Grant Call for Entries

Not only could you win the grand prize of $7,500 in cash, $1,000 in jewelry supplies, and a trip to Arizona, or one of the finalist prizes including cash and feedback, just entering the Halstead Grant competition for emerging artists is a useful tool for improving your business. The contest is open to U.S. citizens who began their jewelry businesses within the last three years and have jewelry collections in silver. The application includes business essay questions and a portfolio. Halstead recommends starting your application two months ahead of time, and the deadline is August 1.

**More at https://grant.halstedbead.com**

## Gemologist Appraiser Program

The Insurance Institute of Jewelry Appraisal is offering a Registered Gemologist Appraiser program, consisting of a series of eight online courses designed and produced by licensed insurance professionals and gemologists. The program is for those who wish to study gemology and personal property appraisal specializing in jewelry and gemstones, or those in the gemstone industry who would like additional education in the evaluation of jewelry and gemstones. Successful completion of this program awards the student the IIJA Registered Gemologist Appraiser title.


**More at https://instituteofappraisal.com**

# Medusa at the Met

The Metropolitan Museum of Art is currently running a special exhibit, "Dangerous Beauty: Medusa in Classical Art." The exhibit focuses on imagery of Medusa, a monster from Greek mythology with serpents entwined in her hair. According to legend, any man who met her gaze would immediately turn to stone. The display, located at The Met Fifth Avenue, includes depictions of Medusa and other mythical female monsters in jewelry and other media, dating from antiquity to the present day.

The exhibit runs through January 6, 2019.

**More at www.metmuseum.org**

**Medusa Mask**
Georges Hoentschel (1855-1915)
Gilt bronze
PHOTO: COURTESY THE METROPOLITAN MUSEUM OF ART

**Medusa Cameo**
Italian, ca. 1860–70
Onyx
PHOTO: COURTESY THE METROPOLITAN MUSEUM OF ART

# Correction

In "Trends: Waste Not, Wear More" in the March/April issue, the name of jewelry artist Dona Antonelli's studio was misspelled. It should be Desert Dreams Design Studio.

**Dona Antonelli**
Dangle Earrings
Upcycled aluminum soft drink cans, Styrofoam cup, glass beads, silver wire

# Coming In July/August

- The Tool & Supply Issue
- New spinner bangle tool and demo
- Chasing hammers
- Tourmaline chain maille earrings
- Super studio hacks

**Kylie Jones**
Chain Maille Earrings
Tourmaline, sterling silver
PHOTO: KYLIE JONES

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Facets accepts news and images of new products, innovations, industry happenings, and events as space permits. Share your news for possible print publication or online use by sending items to karla.rosenbusch@fwmedia.com. Please be sure to indicate "Facets" on the subject line.

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Interweave

*let's be friends* BLOG

## Boulder Metalsmithing Association (BoMA)

*4919 Broadway, Unit 15*
*Boulder, CO 80304*
*(720) 346-3233*
*info@bouldermetalsmiths.com*
*www.bouldermetalsmiths.com*

Located in beautiful Boulder, Colorado, BoMA offers one-day, weekend and multi week hands-on workshops in our fully equipped studio. Classes are geared to all levels from beginners to professionals. Study with world-class instructors in a project- or technique-based class format. We also offer a shared, open studio for experienced metalsmiths. Visit our website to learn more about BoMA and get recommendations for your visit to Boulder.

## Clear Creek Academy of Jewelry and Metal Arts

*3648 Navajo St.*
*Denver, CO 80211*
*(303) 429-1401*
*Fax: (303) 650-4714*
*info@clearcreekacademy.com*
*www.clearcreekacademy.com*

Clear Creek Academy offers classes, intensives and workshops in silversmithing, goldsmithing, lapidary, forging and forming, casting and wax carving, stone setting, PMC, enameling, jewelry photography and more. Quality private or group instruction, flexible scheduling, small class sizes, and excellent facilities and equipment. We also have a student gallery to show and sell your work.

## Jewelry Creations Workshop - Work, Share, Learn

*1400 NE 131st St.*
*North Miami, FL 33161*
*(305) 610-6560*
*www.jewelrycreationsworkshop.com*

Our fully equipped jewelry workshop is home to visiting jewelry instructors, makers, artists and people learning the skills it takes to make beautiful things. Our small classes specializing in hand fabrication assure the special attention you need to learn the most possible. Rental spaces available for professionals and novice jewelry makers who enjoy the sense of community you get at JCW. See you soon!

## William Holland School of Lapidary Arts

*PO Box 980, 230 Lapidary Ln.*
*Young Harris, GA 30582*
*(706) 379-2126*
*lapidary@windstream.net*
*www.lapidaryschool.org*

We offer classes in beading, cabochons, silver, gold, wire wrappings, glass beadmaking, chain making, channel, faceting, gem ID, mineral ID, intarsia, glass fusing, opals, silver clay casting, jewelry repair, and gem trees, from April–October each year. Check out our website.

## Studio JSD

*219 N. 7th St., Suite 4*
*Grand Haven, MI 49417*
*(616) 607-2470*
*www.studiojsd.com*

Students at Studio JSD are encouraged to develop their unique style as they learn fundamentals in jewelry fabrication. Schedules include multiweek class sessions, studio intensives, technical classes and visiting artist workshops. Our guests enjoy a large, fully equipped jewelry studio, small class sizes and professional instructors, located near the sandy shores of beautiful Lake Michigan. Visit the website for current program schedule including special workshops with Gerry Lewy, Michael David Sturlin, Julie Sanford and Richard Salley.

## Quench Jewelry Arts, LLC

*681 17th. Ave. NE, Suite #100*
*Minneapolis, MN 55413*
*www.quenchjewelryarts.com*

We offer a broad range of jewelry classes and workshops for all ages and skill levels. Master series as well as Metalsmithing 1&2 sessions, stone setting, wax carving, lost wax casting, cuttlefish casting, enameling, project-based classes and more. Creative and inviting atmosphere located in the heart of the NE Minneapolis Arts District.

## Meltdown Studio

*3209 Mercantile Ct., Suite B*
*Santa Fe, NM 87507*
*(310) 770-2812*
*info@meltdownstudio.com*
*www.meltdownstudio.com*

Our fully equipped jewelry-making school and co-working studio caters to students of all levels. We offer weeklong intensives, weekend workshops, lapidary, casting, and fabrication classes, private sessions, open studio and permanent bench rentals. Located in beautiful Santa Fe, NM, Meltdown is ideal for destination learning experiences, creative vacations, retreats for groups, friends, and families. We assist with travel plans so you can immerse yourself in the Southwest's most prolific and vibrant artist community!



## Santa Fe Jewelers Supply Bob Hazeltine, Instructor

*3200 Mercantile Ct.*
*Santa Fe, NM 87507*
*(800) 659-3835*
*Instructor Ph: (505) 400-3274*
*info@sfjs.net, www.sfjs.net*
*bob.hazeltine@gmail.com*

Novice or advanced, small group or private (classes limited to 4). We offer instruction for both the beginner and the journeyman. Bob Hazeltine brings 40+ years of experience and award winning designs to the classroom. Comprehensive training available in basic and advanced techniques including stone setting, wax carving and casting, soldering, and lapidary stone cutting and polishing. Add vibrant color to your pieces with Basic or Advanced Enameling classes. SFJS now offers a complete line of enamels and enameling tools. Bob can also customize curriculum to your particular needs. Certificate programs offered.

We look forward to seeing you in class!

## Taos School of Metalsmithing and Lapidary Design

*PO Box 3005*
*Taos, NM 87571*
*(575) 758-0207*
*mndesigns@msn.com*
*www.taosjewelryschool.com*

Taos Jewelry School offers beginning through advanced classes in jewelry and lapidary design throughout the year taught by internationally recognized designer Marilynn Nicholson, known for her unusual techniques in cutting and setting stones, and innovative designs for catches and mechanisms. Individual and small classes emphasize personal attention in an artistically stimulating atmosphere.

## Creative Side Jewelry Academy of Austin

*321 W. Ben White Blvd., Suite 204*
*Austin, TX 78704*
*(512) 799-0731*
*info@creativeside.org*
*www.creativeside.org*

Offering classes from beginner to advanced, Creative Side is the top jewelry crafting school in Central Texas. Private classes and studio rentals are easy to book and cater to individual or group needs. Courses vary each semester from Introduction to Jewelry Making to our Master's Series. We feature workshops including Forged Together where couples melt, pour and form their own fine metal wedding rings and Teen Summer Camps that introduce metalsmithing techniques to budding artisans in a safe and creative environment. We are also the only facility currently holding Argentium Instructor Certification training. Visit our website to learn more today.

## The Craft Guild

*3410 Midcourt Rd., #115*
*Dallas, TX 75006*
*(972) 490-0303*
*info@craftguildofdallas.org*
*www.craftguildofdallas.org*

Since 1948, The Craft Guild of Dallas has offered beginning to advanced jewelry and metalsmithing courses. Mornings, afternoon, and evening classes are avaiable in our new state of the art studios. Study fabrication, wax carving/casting, design, stone setting, enameling, beading, chain making, and metal clay. Visiting artists, classes and workshops are offered throughout the year. Check our website at www.craftguildofdallas.org for details.

## The Ranch Center for Arts & Craft

*12825 127th Ave. SE*
*Snohomish, WA 98290*
*(360) 568-7709*
*randi@theranch-arts.com*
*www.theranchcenterforartsandcraft.com*

Also on Facebook & Crafthaus. Located on 5 secluded acres just a few minutes north of Seattle, The Ranch offers an exceptional learning experience in a variety of media. Our focus: small classes, brilliant instructors. Welcome Nancy Megan Corwin, Robert Ebendorf, Amy Roper Lyons, Piers Watson, Anne Havel, Jesse Bert, PJ Floyd, Ricky Frank, Wanaree Tanner, Sandy Webster, Jayne Redman, Katia Oliva, and Fabrizio Aquafresca to The Ranch to share their expertise. Join us.

## Shake Rag Alley Center for the Arts

*18 Shake Rag St.*
*Mineral Point, WI 53565*
*(608) 987-3292*
*www.ShakeRagAlley.com*

Jewelry Workshops are held in a comfortable, well equipped studio in historic Mineral Point. Class sizes are small, and led by talented regional instructors as well as nationally known visiting instructors. Techniques include fabrication, wire working, beading, polymer clay, and mixed media. 2018 visiting instructors include Sarah Thompson, Richard Salley, Nicole Hanna, Leslie Perrino, Jill Erickson, and Pam Hawkins, and more. See our website for details.

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# Kevin O'Grady

PHOTO: DAVID ORR

**Aspen Stand at First Frost**
Torch-worked borosilicate glass and murrini cane, sterling silver
Hinged bangle bracelet with the artist's patent pending magnetic clasp.

**DONE**
The unique mixing of mediums: glass and precious metals.

**DOING**
I continue to expand my line of borosilicate glass cut and inlaid into sterling silver.

**FIRST PIECE**
I made a ring for my brother in the late '80s from Cerrillos turquoise and sterling silver. It was lost while surfing on the island of Oahu, so I imagine it is somewhere in the Pacific waters around Hawaii now!

**HEROES**
Waylon Peaker, who taught me how to inlay gemstones and changed my life, is forever my hero. May he rest in peace. I also consider Scott Kay an inspirational hero for his exquisite design aesthetic.

**DESIGN SOURCES**
Color, nature, technology, and function.

**FAVORITE PART**
When I have spent many hours designing and perfecting a piece and have put all my heart and soul into it, then when a customer feels what I feel and sees my vision — that is my favorite part of jewelry making.

**THE ONE THAT GOT AWAY**
Two things: a laser welder and a trunkload of old, rare turquoise (including some Bisbee) that I could have bought from a guy in Tucson many years ago. I only bought one pound from him and have always regretted not buying it all!

**ON BENCH NOW**
Torch-worked glass that I just cut and polished, and empty sterling silver components waiting to receive the glass!

**SEE MORE WORK AT**
www.kevinogrady.com

## Set One of Kevin's Cabs

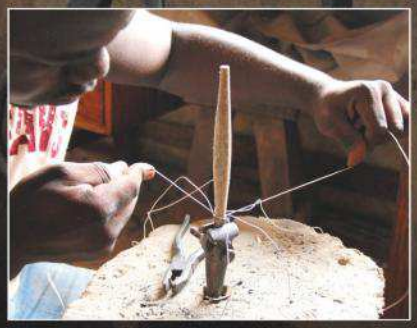
**GUINEVERE'S LAMENT**
**PAGE 50**


Karen Suarez, VA
www.karensuarezjewelry.weebly.com
Honorable Mention, 2016 Metals Jewelry-Making Contest

# Follow the Sound of the Hammer

Walk down a dusty street in Dakar, Senegal, holding a file and an ingot of silver. Listen. Wait. You will hear it. The tap-tap-tap-tap of a hammer shaping metal fresh from the forge. Follow that sound. Find the jeweler. You have never met him before; you barely speak the same language. And yet, because he sees that you are a jeweler too, you are family. He invites you into his shop. You make a trade: He shows you his work, you offer him supplies from the Toolbox Initiative. He pours tea. Then he picks up his hammer and sits at an anvil on the floor. Tap-tap-tap-tap. The heartbeat of the jeweler.

Many West African jewelers forge their own tools.



Sékouba Salo of Guinea weaves a bracelet around a balsawood core. (The finished bracelet is shown at right.)

Sékouba used pliers, a borrowed hand vise and a torch to make this wire-wrapped silver bracelet.

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A simple gift of saw blades and a drawplate can change the lives of jewelers in developing nations. That's the idea behind the Toolbox Initiative, a non-profit that relies on volunteers to personally distribute tools and supplies to West African jewelers. Visit **toolboxinitiative.org**.

Meet Toolbox Initiative founders Matthieu Cheminée and Tim McCreight, watch the For the Love of Jewelers video and learn how you can get involved: Visit **riojeweler.com**.

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