

Barbara M. Berk's "Aquamarine Rhapsody" now in the Smithsonian

May 27, 2024

Gary Roskin - Roskin Gem News Report

Platinum and aquamarine pendant donated to the National Gem Collection



*Barbara M. Berk (left) presenting her "Aquamarine Rhapsody" pendant to curator Dr. Gabriela Farfan inside the vault of the Smithsonian's National Gem Collection.
Photo by Gary Roskin*



*“Aquamarine Rhapsody” pendant: 950 platinum woven by hand.
31.08 ct aquamarine carved by Sherris Cottier Shank, cultured pearls.*

3.6875” H x 1.25” W x 0.5” D

© Barbara Berk Designs, LLC 2004 – 2024

Photo by Robert Weldon

Barbara M. Berk is an artist, an expert in textile techniques in metal, and a jeweler, weaving precious metals into museum quality wearable art, including brooches, necklaces, earrings and hair ornaments. Her award-winning works have been worn, displayed, placed in art museums, and now, “Aquamarine Rhapsody,” a woven platinum pendant, featuring a Sherris Cottier Shank carved aquamarine, resides at the Smithsonian Institution’s National Museum of Natural History as part of the National Gem Collection in Washington, D.C.



*Barbara M. Berk (left) with Sherris Cottier Shank outside the Smithsonian's National Museum of Natural History.
Photo by Gary Roskin*

Washington DC

During a recent visit to the Smithsonian, Berk delivered the pendant and signed over the donation.

Greeted by Dr. Gabriela Farfan, Coralyn W. Whitney Curator of Gems and Minerals collection, along with Russell Feather, Collections Manager (gems), Berk and Cottier Shank were escorted through the labyrinth, the behind-the-scenes offices, laboratories, and secure rooms where the donation was to be received.

Once inside the vault, the four gathered around as Berk unwrapped the jewel, to finally reveal what has previously been seen only in pictures. "I'm delighted that the real thing pleases you," says Berk, as she giggles and then happily places the necklace around Farfan's neck.

"It's pretty in pictures, but it's always prettier in person!" says Feather, with Farfan now smiling from ear to ear. One of the perks of working in the gem collection, of course, is the opportunity to hold, and sometimes even try on, donations to the collection. This piece will be studied and catalogued before going on display.



*Berk and Cottier Shank in the secure room with curator Gabriela Farfan, trying on "Aquamarine Rhapsody."
Photo by Gary Roskin*

Woven Platinum

For "Aquamarine Rhapsody," 950 Platinum wires are woven together by hand off loom using [Soumak, an ancient rug-weaving technique](#). The flat platinum ribbon is formed into a twisting sculptural wave that becomes a pendant featuring the aqua carved drop, while the bare, unwoven portion of the three platinum wires – each finished with a round cultured pearl – is curled to act as the bail.

The aquamarine drop was carved specifically for this jewel by Cottier Shank of Gemscapes in Southfield, Michigan. The 31.08-carat unheated Nigerian aqua drop is notable not only for its size, but for its high clarity, and its bright blue color.

Rhapsody in Tucson

“It all came about because of Robert,” recalls Berk. This was 2004 at the AGTA GemFair and Tucson gem & mineral shows, and the year that Berk won an American Gem Trade Association (AGTA) Spectrum Award. Robert Weldon, working in Tucson as a journalist and gem & jewelry photographer for Professional Jeweler Magazine, had asked Berk and Cottier Shank to do a project that he would then photograph for the following year’s showcase.

“I went home and started to think about what I could do that was something different, and spectacular, and worthy of the project.”

There was one possible idea, she thought. “I had created a gold brooch,” recalls Berk. “I knew that design would lend itself to being modified into a pendant.” This was when Berk was starting to work in platinum. A platinum pendant, with a carved gemstone drop?



Perfecting the design, first using a pipe cleaner, then silver wire for the prototype.

© Barbara Berk Designs, LLC 2004 – 2024

Photo by Barbara M. Berk

Attention to Detail and a Methodical Process

“The first thing I did was make a pipe cleaner prototype.” This would give Berk an idea of size and scale, and enable her to calculate the length of the woven element. Determined to get every detail exact, she then wove a silver prototype. Once the silver prototype was perfected, she was ready to weave the precious metal. “The final prototype gave me proof-of-concept for the design and would serve as the shaping guide for the woven precious metal.”

Copper

“When I first started weaving, and when I made the transition from silver to gold, I had been making prototypes, testing the designs in copper, because copper was cheaper than silver, and it’s what I was used to using in the classroom. Better to make my mistakes while working on the copper prototype. But copper is so soft that I could get a more refined degree of curve when shaping the copper, which I couldn’t match in the gold.”

Since Berk’s gold shapes did not look like her copper prototypes, she shifted to using silver for her prototypes. Shapes she achieved with woven silver were comparable to those she could form with her woven gold and platinum.

“I would always work it out in silver first in case there was something I didn’t anticipate upfront. I wanted to eliminate all surprises so that by the time I was ready to work with the precious metal, I knew everything, and I could control everything. At least that was the goal!”

Weaving Precious Metals: by Hand, Flat, Straight, Off Loom

“Some compare it to macrame. And others compare it to braiding. When I talk to people about my jewelry, I ask if they sew, or knit, or crochet, or braid hair? Did they weave potholders? I remember a little square frame with metal fingers, and you would use stretchy loops, and some went straight from top to bottom and others went over and under, from side to side. That’s a ‘*Plain Weave*’.”



"Double Spiral" Brooch

18kt gold sheet warp and 18kt gold twisted wire weft woven by hand in a Plain Weave.

17.91 cts. Gem Rhodonite carved by Sherris Cottier Shank.

The sculptural gold form becomes a brooch when the gem-topped stickpin is used as the attachment mechanism.

2.125" H x 1.375" W x 1.125" D

© Barbara Berk Designs, LLC 1994 – 2024

Photo by Azad

People are familiar with these textile techniques when worked in fibers such as wool, linen, silk, or cotton. “You can also do those techniques with metal, with sheet and wire. The process of weaving gold and platinum is like weaving with fibers, if a bit more complex, and expensive. But working with metals introduces another consideration, that of structural integrity. I want my jewelry to maintain its shape. I don’t want it collapsing when my client takes it out of the box to wear. So, I use the physical properties and take advantage of the working characteristics of the metals with which I work.”

Hardened Work

Moving and compressing metal changes the crystalline arrangement of the metal’s atoms, thereby increasing its hardness. So, while the precious metal starts out soft enough to weave and manipulate with fingers, it stiffens during the process of weaving and again in the process of shaping. “This work hardening is then reinforced by the inherent strength and density of the techniques with which I work. The result is a structurally sound piece.”

“When I was first introduced to the concept of textile techniques in metal, I was taught weaving, knitting, crocheting, basketry and lace making. In the classroom we used copper, brass, aluminum, titanium, and niobium sheet and wire to learn the stitches and make samples. And then we used silver for our projects.”

Despite the academic training where everybody works with silver – because it is soft, easy to handle, and affordable – Berk knew it really wasn’t working for her. “Silver was a pleasure to weave and curl, but it wouldn’t hold its shape.”



[“S-Curve” Brooch](#)

Gifted by Elyse Zorn Karlin, Publisher and Editor-in-Chief of [Adornment, the Magazine of Jewelry and Related Arts](#), to the [Museum of Fine Arts, Boston](#).

18kt gold woven by hand; 14.20 ct citrine carved by Sherris Cottier Shank tops the stickpin which when used as an attachment mechanism enables the sculptural woven gold to be worn as a brooch. 2.125” H x 2.0” W x 1.25” D

*© Barbara Berk Designs, LLC 1992 – 2024
Photos by Robert Weldon*

Berk tried weaving gold wire into silver sheet. It was firmer, and it held its shape, but the color combination looked “muddy” rather than color blocked. Not at all pleasing.

This of course led her to go for the gold. But there were plenty of people already weaving in silver with gold, as well just gold. So where to?

Complications and Collaborations – Understanding Soumak

That’s when Berk expanded into the rug weaving technique with gold and eventually in platinum.

Weaving is the interlacing of two sets of elements. The elements of each set are more or less parallel and typically interface with elements of the opposite set at right angles. The vertical element is the warp. The horizontal element is the weft.

“There were others who were using basketry techniques with wire. The sizes, the alloys, and the tempers necessary for weaving with gold wire were already known.” So, Berk didn’t have to re-invent the wheel. She simply used the information that was common knowledge to make the transition to all gold, working with 20 gauge 18kt gold for the vertical warps, and 28 gauge 22kt gold for the continuous wire weft. The thicker 18kt gold wires are the skeleton, the thinner and more malleable 22kt gold is the skin.

[In Soumak, an ancient rug weaving technique from Azerbaijan, in the Caucasus](#), both elements are single strands of wire: a thin wire weft and thicker wire warps. Soumak is made flat, off loom. The warp wires are supported in a small vice, creating an open-ended warp system. This allows the weft wire to be easily wrapped around and pushed down the warps, and then packed tightly against the previous rows.

We Need a Platinum Alloy

But what Berk did – and this was new – was to find somebody who could identify platinum alloys that would behave in ways similar to her 18-karat and 22-karat golds.

“And that’s when I went to Jurgen Maerz, the technical director of the Platinum Guild. He did not limit himself to the jewelry industry,” notes Berk. “He brought lots of expertise to the jewelry industry. So Juergen was always my first phone call.”

Making Your Own: Drawing Metal

The two of them went off site for help. Working with a Ph.D. metallurgist, Berk laid out her weavings and gold works. Getting straight to the point, Berk asked, “I want to do this in platinum. Where do we start in terms of identifying alloys?”

After examining numerous samples of gold wire that Berk used, and determining their tensile strength, they were successful in finding different alloys in platinum that were a close match: 950 Platinum/Ruthenium would be the warps, and 950 Platinum/Iridium would be the weft.

Now that she knows what platinum alloys she needs, Berk needed wire. So she went to BJ Williams at [Johnson Matthey](#). And it was Johnson Matthey that drew the wire.

Barbara Berk had her platinum wire! She could now weave with platinum as she had with gold!

“Step Away from the Bench”

“I also learned that when things don’t flow while working on a project, I walk away. It took me about 10 years to really absorb that critical lesson,” says Berk. “If the tension on the wire is inconsistent, the weaving is uneven; if the pliers fall off the bench, they can kink and break the wire; if the flame doesn’t move around enough, the weaving melts long before the solder flows.” If she didn’t walk away, she could easily destroy a piece. “And then the only thing you can do is send it to the refiner and start over. So I try to prevent all melt downs... my own, and that of the piece I’m working on.”

Meet Sherris

“Everything started in Tucson,” recalls Berk. “Tucson has always been very magical for me. I met Jurgen in Tucson. I found Sherris in Tucson.”

Good things typically emerge in Tucson, simply by being at the right place at the right time. For this particular story, we have Berk at the Doubletree Hotel, a then famous meeting spot for gem-holics, talking with Ginger, journalist for AJM magazine (American Jewelry Manufacturer), the forerunner to the MJSA magazine (Manufacturing Jewelers & Suppliers of America). Ginger had written about Berk and her precious metal weavings, so she knew Berk’s work. “‘You have to see Sherris’ carvings,’ she tells me.”

Not knowing how to find Sherris, Berk ended up walking up and down the aisles, looking. This can be an impossible task in Tucson, with dozens of shows and hundreds of aisles.

As fate would have it in Tucson, it was at the GJX (Gem and Jewelry Exchange) where she stumbled upon Cottier Shank’s booth – then under the name Gemscapes.

When Artists Collide

“Barbara had been looking all over for somebody, a carver who would cut drops,” recalls Sherris. “Everyone she was asking was telling her ‘no’.”

And then she meets Cottier Shank.

“She asked me if I would cut drops, and I said, ‘Sure!’” And to paraphrase the classic movie Casablanca, thus began a beautiful friendship.

“So, we talked about dimensions and materials,” says Berk, who then had Sherris carve a half dozen drops to see if this collaboration would work. “She sent [the half dozen drops] to me and said, ‘Choose’.”

Once you’ve seen Sherris’ work, you know why Ginger insisted the two find each other. Berk ended up buying several of those drops, and immediately started using them in her work. “Then we started doing things together.” Sort of...

This Project

While Berk had used numerous drops from Cottier Shank, most were simply pieces created by Berk who then chose a drop from her “Sherris box”. Or Sherris would call to say, “I have a pretty cool drop you gotta see...” and Barbara would add it to her box.

“This project, though, was special,” says Berk, “This is the only one that Sherris and I did together from beginning to end. It was the only one intentionally coordinated from start to finish.”



Russell Feather with Sherris Cottier Shank inside the vault. Russ is holding the 443.18 ct Ametrine sun, which together with 1407.77 cts of softly sculpted rose quartz clouds, comprise Cottier Shank’s sculpture “Southwest Sunset”, donated to the Smithsonian in 2015. Photo by Gary Roskin

TOP RIGHT: The brilliant sun is top gem-quality, natural Bolivian ametrine. The ephemeral clouds are sculpted out of unusually transparent, matte-finished rose quartz from Madagascar. “Southwest Sunset” is 2.75” tall x 4” wide. © Sherris Cottier Shank 2004 – 2024 Photo by Robert Weldon

The Conversation between Carver and Gemstone

“People assign all kinds of meanings and properties to gems,” notes Cottier Shank, “... and I have not experienced anything like that.”

“But what I will tell you is that the gems talk to me.” For Cottier Shank, gem carving is a collaborative event between her and the gem. “It’s not me assigning a pattern to the gem – and it never was.”

So unlike Berk’s methodical process, Cottier Shank’s calling is organic. She studies the piece, and asks it, what are you going to do?

“What does it want? Sometimes, I’ll be carving, and find myself leaning one way, and the stone would pull me in the other direction. And that’s how I carved my entire career. I thought it was extremely collaborative, and...” pausing, she then said, somewhat disappointingly, “no one ever understood that.” There were a few exceptions, Berk being one.

The Prototype

For the pendant project, Berk noted that the pipe cleaner prototype showed her the viability of modifying the brooch design into a pendant, but raised design and execution questions. To weave the silver prototype she had to think about the mechanics of making the piece, of shaping the woven wires, creating the loop from which the gem would be suspended, and designing the bail. All questions had to be answered before she would start weaving the platinum.

“At the same time, I started to play around with different sized beads that I had in the studio as drops to suspend from the bottom of the prototype, so I could get a sense of what size Sherris’ carving should be, given the expected dimensions of the pendant.”

“When I had a better sense of size, that’s when we started talking about materials... what she had, and what might work.”

And she had this aqua!

You Want Plump? I’ve Got Plump!

The aquamarine rough came out of the back of David Cohen’s safe, at Rafco International in New York City.

“I bought pearls from him,” recalls Berk. “One day he mentioned that he had some gem rough and other odds and ends in the safe he wanted to sell, so I connected him with Sherris.”

“He was a sweetheart,” says Cottier Shank. “I don’t know what he was doing with rough colored gems in the back of his safe. He sold pearls, right?”

She bought the aquamarine. “I remember, I brought it home and I was just sitting on it, because it was such a spectacular piece of rough, and I hadn't made any decisions about it.”

So, when Berk called to ask what possible stones she had for the pendant project, Cottier Shank remembers, “I was like, well, I got the perfect piece because she kept saying, ‘plump, I want this to be plump.’ And not everything will do plump. Not everything is plump.” But the aqua could do plump.



The plump drop: Carved around the entire circumference, the 31.08 cts. aquamarine is different from every viewing angle.

21.24mm H x 16.04mm W x 15.24mm D

© Sherris Cottier Shank 2004 – 2024

Photos by Sherris Cottier Shank

Love & Work

“I loved carving gems,” reminisces Cottier Shank who retired from carving in 2017. “Carving gems is both exciting and captivating! Carving is very intense. When I was working, I didn't

want anybody in the room, not even the dog. ‘Don’t bother me!’ It's very intense because you're listening... you're being there with the gem, and the gem is getting all this attention.”

The carving on the aquamarine is fluid as if it were carved in large sweeping movements with lots of little side swoops. When the design is carved, the intense concentration and collaboration with the gem is complete. “Once the carving is done,” says Cottier Shank, “you have to bring the gem from a sanded surface to a perfect shine through long hours of careful and fastidious polishing.”



Government paperwork, Berk signing the official transfer document, alongside curator Gabriela Farfan, with the National Archives building that houses and displays the Declaration of Independence seen in the background through the windows behind them.

Photo by Gary Roskin

What Now?

Like Cottier Shank, Berk has left most of her jewelry work aside, and has gone to [installation art](#). “I started making sculpture with the same design sense that guided my jewelry,” says Berk, “but I don’t have to make things twice. No more prototypes, I work directly with the stainless steel and phosphor bronze, making ribbons and crescents of bobbin lace that become wall-mounted, ceiling-suspended and pedestal-supported sculptures.”

“The greatest gift in working larger scale is that it doesn't have to relate to the body. It doesn't have to fit... and that's been liberating.”

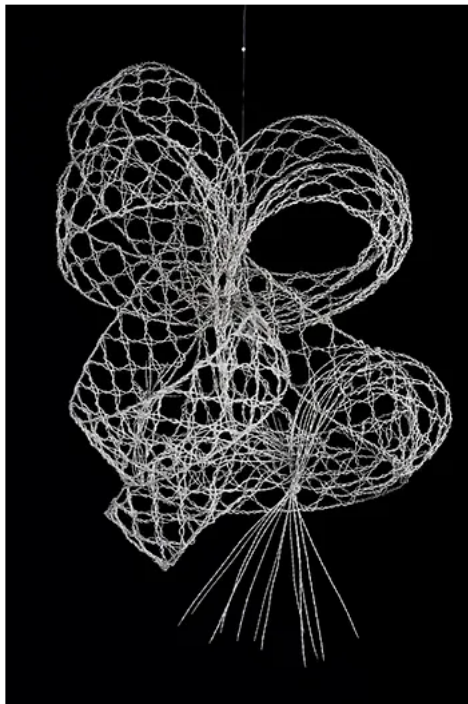
Another factor that gave Berk more freedom was the cost of the industrial metals. She now buys her metals by the pound! “It's \$30 dollars a pound, as opposed to thousands of dollars an ounce.” This has made a huge difference for Berk, as she no longer thinks about cost, or waste, or refining. Her scrap box is about recycling, not value. She can now focus solely on creating.

“I'm free to play, to experiment, to explore!”

You may no longer be able to wear it, but it is magnificent art.

Barbara and Sherris – in the Smithsonian

The two artists couldn't be any more different in their approach, one very methodical, the other very organic. But the combination of their art is simply beautiful, and it leaves you with the understanding of why this piece of all pieces has been welcomed into the Smithsonian Institution's Gems & Minerals Collection with open arms. -- gr



“Not a Bow”
Hanging Sculpture
Stainless Steel – Bobbin Lace
23” H x 16” W x 13” D
2016
Photo by Gary Bridges