



The District of Gemology

Volume 7, Number 3

Fall 2000

It's Party Time!! Come one! Come all! Join us on Sunday, December 3rd, when we throw our Annual Holiday Party, Dinner and Fund-Raising Auction. **Place: Marco Polo Restaurant, 245 Maple Avenue West, Vienna, Virginia.** Mark your calendars now and plan to attend. Bring a guest. Bring your spouse. Bring your friends and colleagues. All are welcome.

It'll be a grand party but even more importantly, it's what earns the funds needed to keep our meeting fees so low and to hold a full eleven superlative monthly meetings, each featuring a local expert or a world-renowned speaker. It also enables us to fund educational opportunities such as affordable seminars and hands-on workshops, plus behind-the-scene tours of special exhibits, as well as our quarterly award-winning newsletter "The District of Gemology."

To do all that, we need your support. First, we need all of you to solicit donations for our Fund Raising Auction. Suggestions: merchandise (especially something unusual or unexpected), gift certificates, services, or cash.

All donations are tax deductible. See the Donation Income Tax Receipt form on page 10 of this newsletter. Copy it and use it.. Copies will also be available at our next monthly meetings along with our Chapter Brochure which explains who we are and what we do. That's helpful when you are soliciting donations.

All donors will be acknowledged both at the auction and in our newsletter, or they may remain anonymous if they

wish. For donations valued at \$100.00 or more we will print a business card size advertisement in one of our quarterly newsletter issues in 2001.

Bring your donations early! You can bring them to the September, October or November meetings. Late donations may be brought to the party on Sunday, December 3rd. You can also mail donations to:

Bobby Mann:
4111 Rocky Mount Drive
Temple Hills, MD
Phone: 301 894 2016
Fax: 301 894 5237
e-mail: mannivorymann@aol.com

Attention Retailers: There's a "Donation Request Letter" on page 11 of this newsletter. Copy it or modify it to fit your needs and mail or fax it now to those vendors and suppliers whom you support throughout the year requesting a donation from them and explaining how it will be used. Enclose a Chapter Brochure in your mailing.

The final step to success: Attend the Auction and bid generously! We will accept cash, checks and most major credit cards for your convenience. Remember: all proceeds go into our Chapter treasury.

The Board of Directors has big plans for 2001. Let's make it happen with a solid bank account. You will receive your Holiday Party Invitations in early November. Please make your reservations early!

Once More With Feeling!

Solicit donations early!
Make your reservations early and bring guests!
Come and bid generously!
Support your chapter and have a great time while you do!

Holiday Party and Auction!

*Sunday,
Dec. 3rd*

*3-4 pm: Cash Bar
& Silent Auction*

*4 pm: Dinner
& Live
Auction*

President's Letter by Carolyn Chappell



Planning, planning, planning!!! That is what your Board is busy doing for the club.....and a lot of the ideas are coming from you, the members!!

We have more ideas for "excursions" to museums (the upcoming Fabergé exhibit in Wilmington, Delaware) and we have ideas and plans for all-day seminars (one on ivory and another on gemstones next spring).

And then of course....THE PARTY AND AUCTION in December. Be sure to make room in your holiday schedule for that, because it is lots of fun.....and we NEED you there, as it is our big Fundraiser for the year! It happens on Sunday, December 3rd starting at 3:00 PM)

We have plans for exciting monthly speakers coming up: Kusam has diligently booked us all the way through until April 2001!!! We have plans to try and run a tape or video library on "Speakers You May Have Missed".....We have plans to get you your VERY OWN COPY of our Member Directory (to be printed VERY soon)and, we have plans to do some kind of more permanent-looking name badges in 2001.

It has been quite rewarding to see how many NEW members we have at each meeting (as many as eleven at our August gathering!).....and getting to know one another a little better by throwing out an "obsolete fact" about ourselves, as we go around the room introducing ourselves and our connection to the gem field. If nothing else, it often generates a laugh or two.....as we glance into each other's past and present interests. It gives us a little bit of "break the ice" conversation, too, and a chance to relate to each other better. Of course, most of the conversations I overhear are related to gems and appraisals, or "hands-on" pieces/stones brought to meetings. It was great to see everyone hanging around the meeting room for an extra 30 minutes after the last lecture, and talking to our speaker and mingling with fellow members. This is the kind of bond we want to perpetuate for the club! And remember, you are all invited to come upstairs and "carry on" with the die-hard group that takes the speaker out to dinner or drinks.

Bring an interested associate to the next meeting and WATCH US GROW! See ya there..... :-))

Carolyn Chappell



*Melanie and Doris
Who could resist this shot!*

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On Monday, July 17th, Ken Scarrett, Laboratory Director of the AGTA Gemological Testing Center in New York City, gave us a superb tutorial on nearly every aspect of that lovely gem, the pearl. It was quite a *tour d'horizon*, covering centuries, circling the globe, and glowing with Scarrett's genuine love for this fascinating gem.

The pearl's history begins in the Persian Gulf. For centuries, divers swam to the oyster beds with nothing but a rope, a brick for weight and a net bucket for the oysters. Finger cov-



Kusam and Ken Share a Moment

ers helped protect the skin from the wickedly sharp-edged shells, but there was no protection from sharks. In his youth, Scarrett saw many people who were missing limbs because of shark attacks. The economies of the Gulf States used to rest entirely on pearls but now, with the advent of oil wealth, natural pearls are being sold *back* to the Gulf States and pearl fishing in the Gulf is mostly for local consumption.

Scarrett surprised some of us by noting that freshwater cultured pearls were in fact produced in 18th century China by dangling shell beads into the mollusk on a fine thread to be coated by the nacre. Also, in 1761, Linnaeus

Ken Scarrett PEARLS

by Brenda Forman

grew cultured pearls in Sweden. These were isolated examples, though, and so when commercial cultured pearls appeared in the 1920s, it was widely feared that they would hurt the market. Instead, the overall market grew hugely. The original gem labs were established as testing labs to tell natural from cultured pearls. Only in the 1930s, with no pearls coming in, did they turn to gemstones.

Scarrett then took us to China where he said that a completely new nucleating process is in use. Instead of 1mm² of tissue, they are placing a rolled 4 mm² piece in the mantle tissue to produce bigger, rounder pearls. His lab has not had time to analyze all the colors coming out of China now. They do know the absorption spectrum of a natural black pearl



And the Winner Is!

(which is different from that of a dyed cultured pearl) but they don't yet know if the same analytical technique will work with other colors.

In 1984, he met his first Melo pearl. These glowing orange pearls, produced by a huge snail with a gorgeous orange and white shell, come from the South China Sea. They are *very* rare since most end up on the ocean floor because they are ejected very readily. They have a surface like a billiard ball with a flame-like texture and there is practically no literature on them at all, so he has just done a book on them.



Making His Point

On the subject of nacre, Scarrett noted that thickness isn't all; you must also look at the quality. Indeed, he said, even a thin coating of good quality nacre can make a good pearl. Asked if nacre quality differed among sources, he replied that he sees good and bad quality in them all, but he has seen more bad quality in akoya because of Japan's pollution problems and the way they are hurrying the growth process. Nevertheless, he does not believe that Chinese white round freshwater pearls will ultimately replace akoyas. They are very different in color and luster, he said, "Almost like comparing chalk with cheese."

Our August speaker was Dr. Joel Arem who took us through a staggering array of new synthetics and treatments. Arem maintains that this is the core issue that will determine the industry's future because when the public wakes up to the fact that many of these synthetics and treatments are growing so sophisticated as to be undetectable, it will destroy the trade.

Synthetic technology has bounded ahead in recent years but nothing like that amount of money has been put into the detection side. We have twenty years of catch-up ahead of us as the trade tries to develop the technology it needs. So, he warned, expect turbulent times ahead.

Beginning with a rundown of processes used to make synthetic gems, Arem noted that the first real synthetic gems were made in 1877 in Paris by Frémy using the flux process to produce ruby crystals. He could never get big crystals, however. In 1904, Verneuil developed a better process that melted ruby powder to build crystals by flame fusion. By 1970, GE had produced synthetic diamonds, including perfectly clear diamonds, using extremely high pressure.

In the 1950s, the Russians developed their "White Bear" diamonds. They were shrewd enough to cut them only as 10-point melee, so they went unnoticed but now that the Russian government has left the big Russian factories on their own, they have shifted into high gear to become the biggest culprit in the market today.

Crystals can be grown by pulling, by the flux process and by the hydrothermal process. In pulling, the crystal is melted, a rod is thrust into it, slowly rotated and then withdrawn, and as the material is pulled, it cools and crystallizes. All silicon crystals for superconductors are grown by pulling. Colorless sapphire crystal is being pulled for use in helicopter gunships to blunt the force of armor-piercing bullets. The original lasers were ruby lasers whose ruby rods were made by crystal pulling. However, pulling can-

Joel Arem

***Synthetics &
Treatments:
Warning!
Trouble Ahead!***

by Brenda Forman

not be used if the material decomposes at high temperature.

In the flux process, a synthetic stone is made from known chemical components that are melted or dissolved and then reconstituted. Ruby is aluminum oxide and it will dissolve in fluxes, which makes it possible to grow very large, very perfect materials that are difficult to detect because their inclusions look exactly like natural ones.

The hydrothermal process uses water. Quartz will dissolve in water if you add sodium hydroxide (i.e., lye). Emerald has been grown hydrothermally for decades.



At the podium

Fred Ward

It can be grown either hydrothermally or with flux but not from melt because it decomposes in the heat.

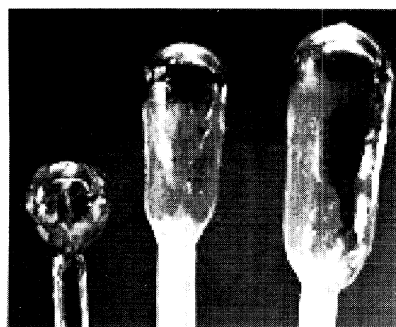
Two types of materials are used to make synthetic stones: Homocreate (materials that duplicate natural materials) and non-homocreate (materials with no natural equivalents). Quartz is grown in colors now. Blue quartz is easy to detect because there is no natural counterpart. But if you add aluminum to quartz and radiate it, it turns purple, making a synthetic amethyst that is so good that the trade has just given up trying to detect it and assumes it is synthetic unless proven otherwise.

Be aware that things are being synthesized now that you may not even know could be. "If it can be made, it has been made," he warned. For example, zincite, which is extremely rare but has been found growing inside of zinc furnaces. Zircon, too, he said: "I'll bet you a beer that if you identified a zircon in your lab, you would say it is natural and you wouldn't realize that it can be made."

Synthetic spinel has been around a long time and the flux-grown red is identical to the finest Burmese spinel. Gilson lapis has pyrite added and is all but undetectable. The pyrite is very evenly distributed, which is not the natural pattern so if you get a big chunk, you might spot it that way but in a little stone, forget it.

Sometimes only size and color betray a synthetic because the genuine stone doesn't exist that way in nature. Examples include wolfenite and periclase. A client recently brought him a fist-sized chunk of bright green material, bought in Kenya as periclase. And it tested as periclase, even though natural periclase only occurs in microscopic crystals.

More and more weird chemicals are being grown for exotic uses and are seeping into the gem trade. There is absolutely nothing about them in the books yet. "There's stuff out there you have never heard of," he warned. And more of it every day. **(Cont. next page.)**



Growth of Verneuil synthetic ruby, one of the earliest known synthetic gemstones

Gem Feldspar: Changing subjects, Dr. Arem proceeded to talk about gem feldspar. Feldspar is hugely common but gem quality feldspar (which includes amazonite, moonstone and labradorite) is very rare.

The market is growing today for new and different things. His candidate for the next big, new thing is sunstone/labradorite feldspar. Sunstone, the Oregon state gem, occurs in lava flows and it is very plentiful. But the Oregon material's color is wildly variable. Moreover, each stone's color changes depending on the angle it is cut. As a result, every stone is different, which makes it unmarketable.

Arem, however, has found a flow of this material containing huge crystals, totally clear, with no inclusions, thus producing a 35-40% yield factor. The smallest pieces can be cut to two carats. Producing 50-100 carat stones is routine. This means that given time, any order, any size, can be produced.

The material is so perfectly crystallized that its hardness is near 7 instead of the 6-1/2 typical of feldspar. It does still have a low RI but it has "pseudo-dispersion," i.e., colors that enter from the outside are reflected internally. Result: it looks like a yellow diamond. He's planning to bring the material to the market with the yellow as the core color. Other colors will be called "fancy." The stones will sell for about \$8-12 wholesale. Price will be completely a function of the size because the quality is uniform.

Few people solely dominate an industry. Fewer still dominate more than one. But John Latendresse was no ordinary man. He was until his untimely death in July the very essence of American cultured pearls and the dominant force for decades in cultured pearl nuclei. For both of those he will be remembered.

However, I will remember John for much more. He was a living encyclopedia of pearl knowledge, an incredibly generous teacher eager to share his vast reservoir of information with others, and a treasured friend.

I miss him already, and I know I always will.

In Memoriam

*John
Latendresse
1925-2000*

by Fred Ward

We met in 1984 in a forgettable diner on the outskirts of Camden, Tennessee. I was writing and photographing an article on pearls for National Geographic Magazine. John sold most of the US mussel shells shipped to Japan to be turned into cultured pearl nuclei. After two hours of talking John convinced me that shell bead nuclei were the most important and glam-



John and His Lovely Wife Chessy



A Beloved Teacher

Fred Ward

orous business in the pearl world. John was an evangelist for the US, for mussels, for nuclei, and for pearls.... and his enthusiasm was contagious.

At dawn the next morning, John and I were in the middle of the Tennessee River looking for some of the divers who supplied him with shells. Throughout the day he never stopped spilling out details of the shell trade. He relived its history for me, alternating mussel stories with nuclei stories and then moving on to natural freshwater pearl stories. Then back to shells. He never tired of talking about pearls. They were his passion and (with his family) his life.

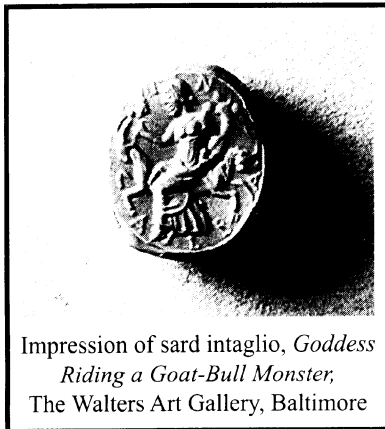
Over the next 16 years I had scores of opportunities to meet and talk with John. We got together every year in Tucson. His generosity in sharing information (and seeking some) was endless. He imported the first Chinese freshwater pearls into the USA and maintained an intimate contact with that segment of the trade. Every time either of us made a discovery or had a new insight, we shared it. Ours was a trusting relationship deeper than I have ever had before or since in the gem trade. John wanted people to understand and to love pearls.

John's passing is as momentous a loss to the United States as Mikimoto's was to Japan. He was the dominant force in pearls here for fully half a century. He can never be replaced. And he most certainly will be missed.

Just as the jewelry worn by people reflects their personality, the decoration of an intaglio ring can identify the subject by using a combination of iconography and detective work. There is an engraved gem with an unusual subject in the Walters Art Gallery in Baltimore. It is an intaglio executed in yellow sard of wide oval shape, mounted in a gold ring. The museum has identified the subject of the gem as a goddess riding a goat-bull monster, and has placed it in the first century AD.¹

The subject of the gem, based on its impression, is that of a woman seated sidesaddle on an animal that comprises the foreparts of a goat (left) and a bull (right). The goat and bull, which appear to be joined in the middle somewhere beneath the woman, seem to be running in opposite directions not unlike Dr. Doolittle's "pushme-pullyou". The proportion of this animal to the woman is not realistic. If she were shown standing by them, their heads would reach approximately to her upper thigh—the size of a large dog. Given the nature of this combined pair, surely the woman is seated on a throne decorated with these animals rather than riding such a strange beast.

The woman holds a stalk of grain in her right hand, and a cornucopia cradled in her left arm. The cornucopia has three round fruits spilling from it. Her hair is gathered into a roll at her forehead and then pulled back into a knot at the nape of her neck. Her sleeveless dress is drawn closely over her torso to be gathered just below her



Impression of sard intaglio, *Goddess Riding a Goat-Bull Monster*, The Walters Art Gallery, Baltimore

breasts, and a mantle appears to have fallen around her lap.

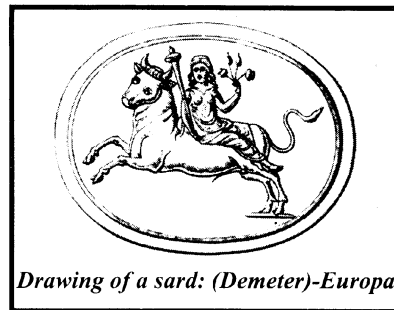
These figures appear against a neutral background, which provides no context within which to place their activity. However, there is a name inscribed in Latin letters along the perimeter of the gem: ALBANI. There are no known Roman associations of this name with this gem. However, the powerful Renaissance Albani family, known for collecting Classical art, may have acquired this gem and inscribed their name on it.

The goat-bull monster in itself is a curious beast, but it has precedents. The idea of combining two animal foreparts is seen as early as the sixth century BC on Greek and Phoenician gems. These gems tend to experiment with various combinations, and

Beauty & the Beast by *Etta M. Saunders, Ph.D.* *Root Jewelers*

the animals can readily be associated with the same astrological signs that we recognize today. A Roman gem decorated only with a goat-bull pair from the first century AD also exists. In this case, Zwierlein-Diehl states that the goat represents Capricorn and the bull Taurus, suggesting that the combination must have astrological significance. Since Capricorn is associated with November and Taurus with April, the Walters gem spans these months.

Narrowing down the significance of the woman's curious mount is helps in discovering her identity. The woman has mixed iconography. She holds the grain and cornucopia associated with the Roman agricultural goddess Ceres (Greek Demeter), yet she is depicted as riding both a goat and a bull. Various women ride different animals in Classical myths. Venus, goddess of love, rides a goat and the maiden Europa, who comes to be worshipped as an earth-mother, rides a bull. A gem



Drawing of a sard: (Demeter)-Europa

associated with an obscure earth-mother cult shows Demeter-Europa, riding sidesaddle on a bull, holding poppies, corn and a cornucopia.

The woman in the Walters gem, then, can be identified as the goddess Ceres through the iconography of the grain, the cornucopia, and the bull. However, she is not only seated on a bull but also a goat. This Capricorn-Taurus zodiac coincides with a December through April agricultural season. Thus, the association of this symbolism with an agricultural goddess such as Ceres is reasonable. Zwierlein-Diehl suggests that the meaning of the goat-bull zodiac could be associated with the protection of Ceres for the prosperity of the crops, particularly the grain, after harvest in November and for harvest festival. If this pair has such a strong connection with Ceres even when she is not present, then the Walters gem must certainly depict Ceres with her symbol.

The date of the gem has already been narrowed down to the first century AD. I believe that we can narrow it down even more, not through the examination of sard, a material used popularly through all antiquity, but through the hairstyle of Ceres. The forehead roll and knotted nape hairstyle worn by the goddess appears in portrait gems of the women in the Augustan era, particularly in those of Antonia, wife of Nero Drusus, who lived from 36 BC to AD 37. This places the date of the Walters gem firmly in the first quarter of the first century AD.

¹ See E. Saunders, "Goddess Riding a Goat-Bull Monster: A Ceres Zodiac Gem from the Walters Art Gallery," *The Journal of the Walters Art Gallery* 49/50 (1991-92) pp. 7-11.

On Wednesday, September 20th, John Bradshaw took us on a lively, thoroughly expert journey through the faceting of a stone, from the original crystal to the gleaming finished product. It was at once highly technical and immensely entertaining -- a rare and wonderful combination!

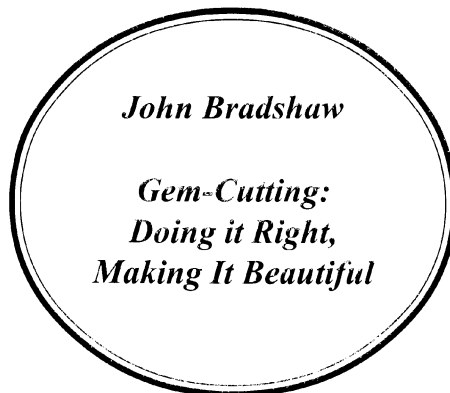
His love affair with gemstones began when he was a kid. A friend of the family was a traveling geologist and he brought him back a mineral from every trip he took. John pursued the interest when he grew up, first beginning to cut gems when he was about 18. He didn't have any teacher, though. "The best instructor is learning yourself," he says. Clearly, he taught himself well.

Beginning at the beginning, he told us that the first step is to evaluate the rough. The gem must be oriented for color, clarity, cleavage planes, twinning planes, optic axis, shape and pleochroism. The shape of the rough is very important in determining the final stone.

You will lose about 30% more weight cutting to the correct angles, but it will look MUCH better. He will always accept less weight if he needs to in order to produce the best stone - but when he asked one of our gem dealer members if he agreed, he got an instant "no," which elicited a rueful but unsurprised smile from Bradshaw.

The basic equipment you need is a lap that rotates horizontally, a protractor accurate to 1/2th of an inch, and a pressure meter. The first step is marking the crystal and studying it. The first trimming is done with saws impregnated with diamond grit in order to maintain as clean a stone as possible. Grinding is done on a flat diamond lap but initial shaping is all done by hand.

The pre-form is then set for dopping and cutting. He cold-dops the stone with Five-Minute Epoxy which takes a couple of hours to set but is much more accurate because wax tends to



move during the cutting process when the stone builds up heat. It takes about two to three hours to cut about an 18 carat stone. Each facet is gone over three times with different grits and the polishing wheel. Then the stone is transferred from the old dop by gluing the new one on and sawing the old one off. After that, the top is cut.

One of his slides was particularly fascinating. It showed a "rainbow" of six brilliantly colored stones and he challenged the audience to identify them. Nobody could. And hardly any wonder! The vivid blue (triangular cut) was Benitoite. The bright green (square cut) was an apatite. The brilliant yellow (hexagonal cut) was a Sheelite. The glowing orange (hexagonal cut) was a Sphalerite. The intense red (nearly circular cut) was a Sunstone. Bradshaw clearly enjoyed stumping yet another roomful of

experts with those pretty puzzlers!

In the Q/A period, the audience peppered him with questions and he responded with a wealth of technical knowledge and tips.

Q: How do you orient a color change garnet? A: It's isometric, the same color from any direction, so it doesn't matter. Garnet is great to begin with because you can't orient it wrong.

Q: How do you keep a facet from getting too big? A: The pressure of your hand on the polishing wheel determines it. Overpolishing one facet can change the lineup.

Q: I had a green Afghan tourmaline that was flawless — until I finished it! A: Afghan tourmalines are notorious for having a huge amount of internal strain. You can just touch the stone to the lap merely to get a temporary table to dop it to, and it could damage the stone.

Q: Is there any really good way to determine the cleavage face on a topaz? A: You can polish directly on a cleavage face on a topaz.

Q: Do you have to polish perpendicular to the C axis to find the optic axis? A: If you know what material you are working with, you can find the optic axis. It's usually along the C axis.

Q: Are diamonds cut the same way as other stones? A: Yes, but they are dopped differently, using a mechanical dop because the diamond builds up so much heat. The

equipment is much bigger and heavier because a diamond cannot take any vibration during the cutting process.

Q: What about water soluble stones? A: There are several ways to cut them, e.g., using alcohol instead of water. There are several water soluble stones but each is different. Collectors are standing in line for them!

One questioner asked if there are any books to help identify planes? A: There's really no right way, but two useful books on the subject are *Faceting for Amateurs* by Glenn & Martha Vargas, and *Gem Cutting* by John Sinkankas.



A Twenty-Megawatt Smile

Fred Ward

***What I
Did at
Summer
(Jewelry)
Camp
by
Doris
Voigt***

My husband Tom and I went to summer camp together this year and it was terrific. Of course, this particular summer camp was the only kind that would interest gem and jewelry lovers like us, namely, the 21st Antique & Period Jewelry and Gemstone Conference — or Jewelry Camp for short — run by that living dynamo, Joyce Jonas, from July 27th to August 2nd in Rhode Island on the Bryant College campus just outside Providence. Most club members know about Jewelry Camp and some of you have probably gone but if you haven't, you should. Wow, what an experience! What fun!!

Tom and I are primarily collectors and students of the science and arts of the jewelry industry. When I see jewelry, I like to know what it is, where it came from and what it's really made of, and Jewelry Camp is certainly the place to learn. Its superb faculty provides wonderful insights and instruction in essentially every aspect of jewelry and its history. For me, the most interesting subject is what's in fashion today and the industry's concept of what the upcoming trend is likely to be.

I cannot speak highly enough about the Faculty. This year, it was some 43 strong.

Several have lectured to our own illustrious organization. Remember Christie Romero's sparkling erudition and Penny Jones-Napier's Internet savvy? How about Antoinette Matlins' down-to-earth crash course in gem identification? Not to mention the great Jade expert Don Kay. But the Faculty at Jewelry Camp covers a much wider range of expertise than our Chapter can cram into a mere 12 monthly meetings. Our own Brenda Forman was there, lecturing on her wonderful new translation of Henri Vever's landmark study of French Jewelry in the 19th Century. (Brenda is in the process of publishing her translation and I'm dying to read the whole thing! She is a real storyteller!) Another highlight occurred during Denise Kowal's lecture on "Legend, Lore and Commerce of Opals," when she held up our own Fred Ward's book as the primary reference. I was thrilled, to say the least!

The faculty covered everything you could think of related to jewelry, from its history and the business end to hands-on classes on gem instrument usage, enhancement detecting, examination techniques, Internet research, precious metal testing and my favorite, an antique jewelry hands-on lab hosted by Barry Weber of New York.

One of the things I love most about Jewelry Camp is the amazing range of people you meet there. The conference attracts gemologists, collectors, dealers, appraisers, designers, historians, manufacturers, auctioneers, educators, and retailers. It has something for everyone: professionals, beginners and individuals



Fellow Campers Brenda and Doris



***Doris wearing some of her
gorgeous sparklies***

who simply love jewelry. You could spend twice as much time there and hardly scratch the surface of the information available to you, nor get to talk to all the fascinating folks there. I don't know about you, but summer camp when I was a kid was nowhere near as much fun as that!

Of course, I brought some of my prettiest sparklies to wear. You want to take advantage of such an appreciative audience! I changed them every day and I got a lot of compliments on them. Of course, so did a whole lot of other people there too. I could admire something gorgeous every time I turned my head. These folks not only know their jewelry, they wear it! LOTS of it! You can learn a lot about jewelry just mingling with the crowd at the coffee breaks.

After the whirl of the day, we hung out at Parente's, a lively restaurant close to the campus that serves superlative lobster rolls, seafood and beer. Then we adjourned to the local mall for ice cream. (You can't be a student ALL the time.) Depend on it, I'm going to be there next year too. And if you love jewelry, you should think about going. See you there!

A versatile new material is becoming a serious contender in jewelry manufacturing. Precious Metal Clay™, developed by Mitsubishi Materials, Inc., in 1995, has opened many new design possibilities for metal working.

What is PMC?

PMC consists of finely disseminated metal (usually silver or gold) in a clay-like binder. It can be worked much like clay, but when it is fired in a kiln, the binder burns off and the precious metal remains. Silver PMC is fine silver .999 and the gold PMC is 24K. Lower karat gold and platinum PMC, which require special kilns are sold in other countries. The latest addition to the product line is PMC plus, which is a reformulation of silver PMC with a higher percentage of silver that fires in only ten minutes and shrinks only about twelve percent.

What are the advantages of PMC?

Compared to using sterling silver sheet and wire, PMC is much more versatile, and it can be worked much more easily and more quickly. Because almost all the preparation of a piece can be completed before firing, while the PMC is soft or air hardened, there should be no time-consuming clean-up after firing. Findings can be added before firing, eliminating the need for soldering and avoiding fire scale. PMC is an excellent medium for fine detail and texturing. Not only is detail perfectly preserved, but because it is reduced by the firing, the detail looks even more precise. Because silver PMC is fine silver, it also resists tarnish, so polishing is rarely necessary. Though lost wax

casting can be used to create pieces similar to PMC pieces, PMC is a lot faster and less cumbersome medium. Unfired PMC can be recycled and reused.

What are the disadvantages of PMC?

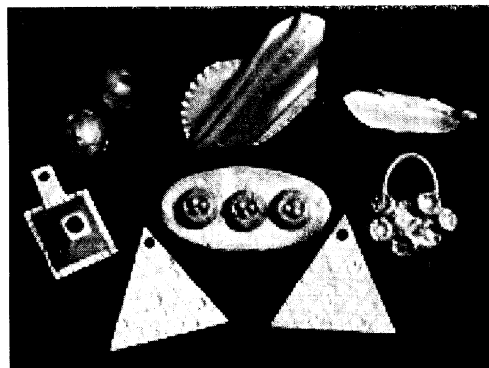
PMC is only about 80 percent as dense as sterling silver, so it is slightly porous and can be somewhat fragile. The porosity makes soldering slightly more difficult but not impossible. Without the advantage of the addition of other metals for strength, PMC's softness makes it impractical for certain applications, such as prongs, where durability is necessary. PMC is also more expensive than sterling silver.

Precious Metal Clay: Part I

by
Cathy Gaber

How do you work with PMC?

PMC should be worked on a very flat surface such as glass or plastic. Any pattern in the surface (wood for instance) would leave a pattern in the PMC. Since PMC is somewhat sticky, olive oil is used to lightly coat the working surface, the hands and tools such as the roller. A hydrated substance, PMC starts to dry out as soon as it is unwrapped. Keep unused PMC wrapped or covered at all times. Heavy plastic wrap is ideal for this purpose. If PMC does start to dry out, it can be reconstituted by adding water, rewrapping and letting it soften overnight. The latest tip is to use hand lotion or olive oil for reconstitution, on the theory that it does not dry out as quickly.



Buttons, Beads, Brooches and More

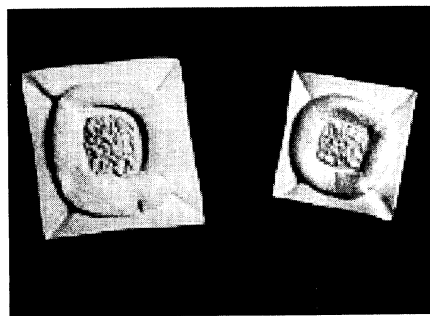
What can you do with PMC?

Some of the most common techniques for working with PMC include rolling it into sheets, hand modelling, stamping with any kind of stamp (rubber stamps, wood stamps, or any homemade stamp), molding (ready made or dental molding material for custom molds), coiling, etc.

For hollow constructions, PMC can be formed over paper clay or organic materials such as cereal or bread using Sobo glue™ to help the PMC adhere to the form. Wood and bamboo do not need to be coated with glue. Slip can be made of PMC and water which can be used as a "glue" to attach separate PMC pieces. Slip can also be used as a design element by painting with it or by applying it with a spatula. A special formulation of PMC comes in syringes to be extruded either alone or as decoration. Special ceramic ring molds can even be used to form rings in exact sizes.

PMC Certification

In October of last year, I took the three-day PMC Certification class for instructors and received my certification. This came along with a year's membership in the PMC Guild, which has a number of perks. An informative newsletter is published quarterly and the website <www.pmcguild.com> lists classes and will host guild members' web pages for a nominal fee. Rio Grande, the sole distributor of PMC in the U.S., hosts a PMC Rewards discount program for certified users. They also sell Tim McCreight's video and his brand new book on PMC.



Before and After

**GIA**

GEMOLOGICAL INSTITUTE OF AMERICA

Washington DC Chapter GIA Alumni Association

The Washington D.C. Chapter of the Gemological Institute of America Alumni Association will be holding their annual fund raising auction on December 3rd. I am writing to all our vendors, business associates and friends to solicit a small donation for this upcoming holiday auction.

The proceeds from the auction allow us to present outstanding speakers, affordable seminars and workshops to further the education of our members. Your donations may be in the form of cash, merchandise, gift certificates or services. As the auction will be held in conjunction with the party on December 3rd we are hoping to receive all donations before the end of November. Late offers will of course be accepted.

Any donation will be appreciated and you will be mentioned in our award winning quarterly newsletter, "The District of Gemology", which is sent to over 300 people involved in the gem/jewelry business in our area. For any donation of \$100.00 or more in value, we will print a free business card size advertisement for your company in one of our quarterly issues in 1999. We also accept paid advertisements for our newsletter.

Please send donation items and advertisements care of:

I can be contacted at _____ for additional information. Thank you for your support.

Sincerely,



GIA

GEMOLOGICAL INSTITUTE OF AMERICA

***Washington DC Chapter
GIA Alumni Association***

DONATION INCOME TAX RECEIPT

Thank you for your donation!

NAME OF DONOR _____

ADDRESS _____ CITY _____ STATE _____ ZIP _____

It is with sincere appreciation that your donation to the Washington, D.C. Chapter of the GIA Alumni Association, is hereby acknowledged.

By _____ Date _____

All items donated to the Washington, D.C. Chapter of the GIA Alumni Association are deductible for income tax purposes at their present fair market value. The method used to determine the value is the responsibility of the donor and not the agency receiving the gift. No goods or services were provided to the donor in exchange for this donation.

Description of Item: _____

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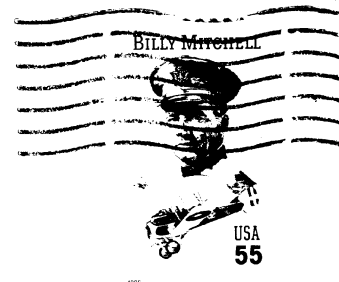
***Cathy & Bruce Gaber
and
Helen Serras-
Herman
Honored***

Bobby Mann
4111 Rocky Mount Drive
Temple Hills, MD 20748-5646.

Thanks in advance for your cooperation.
Send me any comments or suggestions:
e-mail: mannivorymann@aol.com,
telephone 301-894-2016.

Meanwhile, Bruce Gaber also got a First Place Award in Features for a President's Message and Helen Serras-Herman got a Second Place Award in Original Educational Articles for "Ancient Greek Ivory Carvings." Pretty terrific, no? Great going, you three!

Washington, D.C. Chapter GIA Alumni Association
c/o Brenda Forman
7336 Lewinsville Park Court
McLean, VA 22101



TO:

VA 22101

Holiday Party & Auction - Ken Scarrett on Pearls
Joel Arem on Synthetics & Treatments
Precious Metal Clay - John Latendresse

