ACCREDITED GEMOLOGISTS ASSOCIATION

P.O. Box 996
Laytonsville, MD. 20760

(301) 977-0335

NEWSLETTER

VOLUME 4, NO. 3 SEPT., 1979

A MESSAGE FROM THE PRESIDENT

The past year has been a momentous one, both for the gem and jewelry industry and for the AGA. Nobody connected with the gem industry can help but notice the acceleration of demand and price increases in both diamonds and colored gems. This is, of course, symptomatic of the awareness on the part of the general public of the deterioration of currencies and the need for capital preservation through tangibles. Conservatives and liberatrians have, for years, been warning of the dangers of overextension of the money and credit supply; this has been pooh-pooh'd by the government and many academic economists. Now we are seeing that, indeed, there is a price to be paid for overprinting of currency, and it's more than just a bill for printer's ink.

Rubies coming from Bangkok (the only world supply for all practical purposes) will be up approx. 75% for the total year 1979. This is an increase of 25% in the RATE of appreciation over what it has been for the past 4-5 years. Diamonds recently moved upwards approx. 20-30%. A flawless round diamond of D color now wholesales in New York for between $29,000 and $31,000. This compares to a price of $1,500 for the same stone in 1965, an increase of about 20 times. Other gems have performed in similar fashion. Precious topaz, for example, has incrased about 20 times in price in the past 10 years. Even tourmaline has gone up nearly comparable amounts, although such increases are not well known to the public. These increases are due to a combination of worsening supply plus improving demand, and the loss in purchasing power of currencies.

It is slowly but surely becoming obvious to even the most conservative of money managers that a return on investments of 9-10% in the face of a 15-20% inflation rate inevitably leads to loss of capital. It is becoming fashionable to put tangibles, such as antiques, rare coins, gems and jewelry and even Persian rugs into Keogh, IRA and other pension plans. More and more plans are being written that allow the plan holder total flexibility and discretion in spending the money for the plan. The total pension plan assets in the U.S. are estimated at well over half a TRILLION dollars. It is easy to see that if even a small fraction of this money flows into the gem market, the price of quality stones will increase astronomically.

The increasing demand for stones makes it imperative that the public be assisted in both purchase and liquidation. The alternative to this is a prevalence of ripoffs in the trade with consequent outcry and demand for government action. This would untimately result in a regulated gem industry, something that NOBODY in the trade wants. The only people who are equipped to prevent this eventuality are the accredited gemologists, who are capable of distinguishing between natural and synthetic gems, and assessing gemstone quality.

The AGA is the ONLY organization of its kind, and also the ONLY organization that requires of its members ONLY ACADEMIC EXCELLENCE IN THE FIELD OF GEMOLOGY. We are thereby distinguished from such commercially-oriented organizations as the AGS which primarily uses commercial standards (a store, • related requirements) as qualifications for membership. In the long run, despite protests to the contrary by some, AGA may emerge as the leading organization to represent the field of GEMOLOGY and will then assume leadership in the establishment of industry standards for professionalism in this field.

This is, of course, summarized in the organization's motto, below:

TO DEVELOP AND PROMOTE PROFESSIONAL STANDARDS IN THE PRACTICE OF GEMOLOGY

(continued)

This will be my last term as President of AGA. It has been a tremendous source of satisfaction for me to see the dramatic growth of the organization and the widespread interest in AGA on the part of gemologists everywhere. When I took office 3 years ago membership stood at approx. 50; membership now is touching the 250 mark, an increase of 500%. Our members are spread all over the world and provide to this office a degree of communication regarding gemological matters that is unmatched anywhere. I see the current position of AGA as just below the peak of a critical growth curve. If we do not take action as a group to increase the size and scope of AGA, it may well die of attrition. However, if membership can be pushed to 450-500 within the next 4-6 months, the group thus represented is large enough to truly represent the gemological community. There is a limit to what a single individual can do; I can only call on the dedication of all AGA members, many of whom have been perhaps a bit passive in their activity within the organization. If EVERY AGA MEMBER wrote just ONE letter or made just ONE phone call to a fellow gemologist who is not already a member, this would double the roles overnight and assure the future of AGA. I would like to see this happen as a fitting climax to the year 1979.

Several suggestions were made at a recent AGA meeting in Washington, D.C.regarding advertising in the jewelry trade magazines, such as JC-K and National Jeweler. Such ads would keep the presence of AGA visible on a continuing basis and would be quite valuable. A suggestion was made by several members during the past few months that AGA have its own conclave, similar to that run by AGS. This is a superb idea, but would not be truly practical until membership reached about 1,000 to assure a reasonable attendance and sufficient attendance fees to cover all the costs involved.

The continuing improvement of communication among gemologists is a MUST. The following statement may be disputed by some, but is my opinion and relevant to this discussion:

> Good communication may not solve all problems, but it solves many and prevents others from arising. On the other hand, poor communication almost certainly will spell the demise of a relationship, a company and an organization or association. This is a lesson that could be well learned by married couples and beaurocrats, as well as association members.

I intend to stay on as Newsletter editor for AGA and make every effort to improve it in both content and format. Readers will start noticing such additions (suggestion of Theresa Zook) as a box containing exchange rates of major currencies and a current price quote on gold and silver. Starting in January I will be writing an extensive set of price guidelines for colored gemstones, that will appear on a regular basis in the PreciouStones Newsletter. This newsletter is aimed at the serious gemstone investor and money manager, and is very professionally produced and contains a wealth of very reliable market information.(for information, write: PSN, P.O. Box 4649, Thousand Oaks, California 91359). I hope to be able to reprint this information in the AGA Newsletter.

I am very anxious to see the establishment of REGIONAL CHAPTERS of AGA in major cities. This is a further way of enhancing communication among members and also providing a localized format for looking at stones, using new equipment and exchange of ideas on a regular basis. Reports of such local activities should be written up and sent to the AGA office for inclusion in Newsletters for the benefit of all members. I am today writing letters to individuals in the following cities in the hope that they will assume a leadership role in creating local AGA chapters:

HOUSTON - Day McNeel MIAMI - Joe Tenhagen CHICAGO - Harold Oates
LOS ANGELES - Sarabeth Strong ATLANTA - Jay Semmes PHOENIX - Kurt Arens
ST. LOUIS - Cornelius & Lilian Muije S.F. BAY AREA - Rochelle Continente

We need leadership in such metropolitan areas as New York City, Dallas-Ft. Worth, San Diego, Cleveland, and New Orleans. Everyone has a membership list - contact the chapter leader in your city and if you don't have one, BE ONE.

(continued)

Several additional comments: we need a steady stream of writing for the Newsletter. Many of our members have generously contributed notes, articles and comments. Everyone in the organization is urged to contribute, even a few pages once a year. If everyone did that we would have a backlog enough for 10 Newsletters and make each issue much meatier, perhaps even be able to increase the frequency of publication. Ultimately I would love to see a bound magazine with a glossy cover, and perhaps color photography in some issues. This will depend on a large enough treasury balance, which will depend on total membership.

This brings up another point - PLEASE TAKE NOTE of the call for 1979 dues below. Without continuing funds we cannot hope to achieve the many goals we have set for AGA.

It has been a great pleasure to serve the AGA as President for the past 3 years. The many letters of encouragement, suggestions and the visible growth of the organization has made the work worthwhile. Let us all work together in the future to make AGA the acknowledged world leader in "developing and promoting professional standards in the practice of gemology".

Joel E . Arem, PhD, FGA

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PLEASE NOTE: DUES ARE DUE

If you have not already paid your dues for 1979, please send a check for $15 to:

TOMIKO BUTLER 9205 New Hampshire Avenue #206 SILVER SPRING, MD. 20903

You may also send your ballots to the same address - see last page for notice of election of officers.

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We very much need volunteers to help keep track of accredited gemologists. The GIA will NOT send us a list of addresses of graduates. However, the names and cities are published in the JC-K. Likewise, the British Association publishes the names and cities of recent FGA awards in the January issue of the Journal of Gemology each year. It is a simple matter of tracking down the whereabouts of these people via such publications and sending them information about AGA. The AGA office stands ready to supply copies of all membership forms and materials to anyone who is willing to send them out. Please write to: AGA, P.O. Box 996, Laytonsville, MD. 20760 to request forms.

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A NOTE ON APPRAISAL INFORMATION

I especially ask the members of AGA to be a bit patient insofar as the production of the awaited special issue on APPRAISALS. I have a thick file of information on the subject and many comments from AGA members. Putting this all together is a major undertaking and, as you are aware, should not be done in haste. Your Newsletter Editor suffers from the same fate as many of you - the commitments of a large business enterprise which seem to take more hours than there exist in each day. AGA is not yet large and rich enough to have a permanent office and staff; it's a labor of love for us all. The weeks fly past and then a regular issue of the Newsletter must go out. So the Appraisal issue will probably be a special issue and hopefully will appear in the very near future.

JA

MORE ON DIAMOND INCLUSION

In the last issue of the Newsletter there was a comment by Barry Fixler on a yellow fluorescent inclusion in a diamond. The following comments were received from Joe Gill on this item :

" In regard to Mr. Barry Fixler's question in the letter, I feel sure that the yellow inclusion is a diamond. In the course of dealing with white and colored diamonds on a daily basis I have seen this before. The included yellow "blob" may have been one crystal or a close cloud of crystals. Yellow diamonds very frequently fluoresce bright yellowish-green.

EXCHANGE COLUMN

The previous issue presented an abbreviated list of books being sought by member Joseph Gill. Here is the rest of the want list. Write to: Joseph Gill, c/o J & S.S. DeYoung, Inc., 373 Washington Street, Boston, MASS. 02108.

Moon,F.W., PRELIMINARY REPORT OF GEOLOGY ON SAINT JOHNS ISLAND,Geological Survey Egypt, Cairo, 41 pp 1923
Murray, J.,MEMOIR ON THE DIAMOND, London, 1839
His Majesty's stationary office,GEMSTONES, London, 1933, 137 pp
Natter L.,A TREATISE ON THE ANCIENT METHOD OF ENGRAVING PRECIOUS STONES COMPARED WITH THE MODERN, London, 1754
Northup H.D., BEAUTIFUL GEMS, 1890
Orpen, G.,STORIES ABOUT FAMOUS PRECIOUS STONES,1890
Paxton, JEWELERY AND THE PRECIOUS STONES, Phila., 1856
Renton, Edward,INTAGLIO ENGRAVING OF GEMS,London, 1896
Story-Maskelyne, A CATALOGUE OF THE MARLBOROUGH GEMS,London, 1870
Sutton,J.R.,DIAMONDS,London, 1928
Taylor, L.,PRECIOUS STONES AND GEMS, London, 1895
Tolansky,S.,THE HISTORY AND USE OF DIAMOND,London, 1962
Woodman,H.J.,THE LANGUAGE OF GEMS,Boston, 1848
Williams.Alpheus H.,SOME DREAMS COME TRUE, 1948

IT CAN STILL HAPPEN

The following tidbit was included in a warm letter from Harry Dunn of New York State: "Recently I had a red stone set in a silver stick pin for identification. The pin was picked up in a "flea market" for the sum of 50¢. The stone proved to be a Siam ruby of good quality of about ½ ct. +. This is the second I have seen in the last eight years. I suppose that sometime in the early 1900-s "X" number of rubies were mixed with pyrope garnet".

CLOUT

The following was offered by Harold Oates of Glen Ellyn, Illinois:
"At the present time gemologists are hard pressed to acquire new synthetic material to study or even to read about until the stuff is being sold in jewelry. We've got to exert some clout on the manufacturers to furnish small samples to the gemological world in order to protect the consumer. The GIA seems to get this material, but are reluctant to help its graduates. They do manage to put something in Gems and Gemology long after we've already seen them. It should not be a major problem to get enough samples for each chapter of AGA if the problem were to be presented by the right person. Even rough material would be satisfactory; we can cut it ourselves. The cost - well, it costs to learn and I'm sure we can cough up the money somehow."

ED. NOTE: An adage that helped get me through Graduate School at Harvard was:

"Never begrudge the money you spend on your education".

MINUTES OF AGA MEETING - Dale Farringer, GG, Secretary

Meeting of Sept. 10, 1979 - Washington, D.C. Chapter

A meeting of AGA members took place at the residence of President Joel E. Arem in the Maryland suburbs of Washington, D.C. The meeting began shortly after 8 PM and adjourned around 10:30 PM.

A discussion was held regarding the ways of increasing the membership (now approx. 250) and for furthering the objectives of AGA in the jewelry industry and the science of gemology. In order to reach people who are qualified for AGA membership, Theresa Zook moved that an advertisement be placed in three jewelry magazines, namely: Jeweler's Circular-Keystone, Modern Jeweler and National Jeweler. The advertisement would invite GIA and FGA graduates interested in professional career advancement to write for membership information to the AGA office.

The AGA members present acted as a Nominating Committee pro temp., and nominated the following for office in 1980:

President: Anthony C. Bonanno (FGA)
1st Vice-Pres.: Sonja Schwartzman(FGA) 2nd Vice Pres.: Joseph Tenhagen (GG,FGA) - Miami
Corresponding Sec'y.: Dale Farringer (GG) Recording Sec'y.: Chris Evans (GG)
Treasurer: Robert O. Daube (GG)

NOTE: SEE BALLOT BELOW

President Arem arranged for a demonstration of laboratory equipment manufactured by Manfred Eickhorst of Hamburg, W. Germany. This instrumentation included diamond grading colorimeter, horizontal microscope, spectroscope, refractometer/polariscope and UV box. The Eickhorst design represents the state-of-the-art in gemological instrumentation and is more sophisticated and has greater capabilities than other instrumentation available currently in the U.S. Marketing of these instruments is now underway and a detailed description of them will appear in an AGA Newsletter.

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BALLOT FOR OFFICERS:

PLEASE VOTE YES/NO FOR OFFICERS AS LISTED BELOW BY MARKING THE APPROPRIATE BOX. SEND THE BALLOT (DETACHED FROM THIS PAGE) IN A PLAIN WHITE ENVELOPE, ALONG WITH A CHECK FOR 1979 DUES, TO: TOMIKO BUTLER, 9205 New Hampshire Avenue, #206, SILVER SPRING, MD. 20903. IF YOU HAVE ALREADY PAID DUES THIS YEAR (OR ARE A NEW MEMBER AS OF 1979) ENCLOSE A SMALL NOTE TO THIS EFFECT IN THE ENVELOPE. THOSE WHO HAVE NOT PAID DUES AS OF THIS BALLOTING WILL BE DROPPED FROM AGA ROLES. PLEASE ALSO VOTE FOR THE ITEM "A" LISTED BELOW.

ALSO: PLEASE SIGN THE OUTSIDE OF THE WHITE ENVELOPE CONTAINING THE BALLOT.

	VOTE FOR	VOTE AGAINST
PRESIDENT: ANTHONY BONANNO	☐	☐
FIRST V.P.: SONJA SCHWARTZMAN	☐	☐
SECOND V.P.: JOSEPH TENHAGEN	☐	☐
RECORDING SECY.: CHRIS EVANS	☐	☐
CORRESPONDING SECY.: DALE FARRINGER	☐	☐
TREASURER: ROBERT DAUBE	☐	☐
"A": THE AGA SHOULD ADVERTISE IN SEVERAL OF THE BETTER KNOWN JEWELRY TRADE MAGAZINES ON A REGULAR BASIS.	☐	☐

NEWS FROM JAPAN

The following comments are from Edwin Sasaki (FGA), one of Japan's leading gemologists. Edwin notes that Japan has progressed very rapidly in gemology with the support of trade organizations. One major setback is the language barrier. Many of the older generation jewelers refuse to adapt to western language usage, and rely for interface with the U.S.A. and Europe on their sons and daughters.

Why did the various testing organizations make their appearance? In the past few decades, before the various laboratories appeared, many merchants bought real and synthetic stones alike, commonly from Indian merchants, in mixed lots. Of course, the work of a lab is to analyze the physical properties of gemstones and then to determine whether a gem is natural or has been artificially produced. The demand for lab services comes from two categories of people: those who are already in the gem trade, and those who may be about to enter the business. Many laboratories therefore also offer educational material and training in addition to identification services.

The gem trade has expanded so greatly that large scale business and enormous sales volumes are possible. This involves the participation of top-level salespeople who must concentrate their efforts on sales and must neglect the technical aspects. This has put an increased burden on the laboratories, firstly to provide better educational facilities, and also to provide accurate certificates. Without laboratory certificates the top-echelon salespeople cannot produce volume sales. It is a curious aspect of the current gem trade that the sale is often made by someone who does not take responsibility for the identification and quality determination of his product.

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CERTIFICATES - DIAMONDS OR OTHER STONES by L.E. Muije (GG) and C.S. Muije (FGA,GG)

The paper by Kurt Arens in the May,1979 AGA NEwsletter makes many valid points. However, it does not touch on what we consider the major flaw in the certification process:namely, THE MOMENT A STONE PLUS CERTIFICATE LEAVES THE GIA THERE IS NO ASSURANCE THAT THE STONE BEING OFFERED FOR SALE IS THE SAME ONE AS THAT CERTIFIED. The only identification of a D-Flawless stone is its weight, the dimensions and a plot that shows nothing. The same stone can be sent to GIA several times and D-Flawless certificates obtained. A dishonest seller could then substitute F or G Flawless or even E or F VVS_1 stones with the same weight and dimensions. The Leveridge gauge is not that accurate; if a diamond is measured by GIA as 5.04x5.11 mm, and we read 5.02x5.08 mm, is our Leveridge gauge off or perhaps are we measuring at different points on the circumference, or is it a different stone? In practice, the buyer usually does not have the stone recertified. And if he did, a supposed D-Flawless coming back F-VVS_1 might be attributed to overcautious, newly hired GIA graders who penalized the stone "just to be on the safe side". The above is not a hypothetical example - it has been done before and will be done again.

(continued on page 7)

REMEMBER TO SIGN THE ENVELOPE CONTAINING THIS BALLOT.

SEND CHECK FOR DUES ($15) WITH THIS BALLOT IF NOT PAID IN 1979.

PLEASE RETURN BALLOT BY OCT.10 TO INSURE ITS BEING COUNTED.

CERTIFICATES (Continued)

It is equally obvious that a beautiful 3+ carat natural ruby can be sent to GIA for certification, come back certified as a natural ruby, and then be replaced by a synthetic stone of similar weight, dimensions and cut. In this case a fraudulent dealer does not even have to worry about an inclusion plot!

We have been exposed to certified stones in sealed plastic containers, accompanied by dire warnings that breaking of the seal invalidates the certificate, something like a "Catch-22". Grading in the plastic container proved to be impossible. In one case where, in spite of the warnings, the seal was broken, we graded the stone lower in color and clarity than was stated on the certificate. A system like that, which ties the stone to the certificate, may have possibilities, but only if the grading organization has an impeccable reputation and the sealed container cannot be duplicated.

Europeans tend to be more careful than Americans. For large investors, the former control this situation. If, for example, an investor wishes to put several hundred thousand dollars in D-Flawless stones, the Bank acts as a custodian and arbitrator. Only GIA certificates and certificates from one other country are accepted as adequate. The bank sends the stones to the certifying organization. Contracts are written subject to the stones achieving the claimed grading. Once the deal has been closed, the bank retains possession of the stones. When the investor is ready to sell, the transaction is completed without the stones ever leaving the bank. Based on decades of trustworthy arbitration of international trade deals, the bansk are considered beyond reproach.

As things stand, however, in the United States, we would not accept that a stone being offered is the same one as that certified by GIA. A new certification would have to be obtained.

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THE MARLBOROUGH CHRYSOPRASE DEPOSITS by Grahame Brown (FGA,FGAA, Dip. DT)

Gem quality chrysoprase has been mined commercially, since 1963, from a Tertiary nickeliferous laterite developed on a serpentinite in the Marlborough Creek area of Queensland's Bowen Basin. Marborough Creek is located 80 km. northwest of Rockhampton, a large city on the central Queensland coast.

The Marlborough serpentinite body covers 200 $km.^2$ - the largest serpentinite body in Queensland. Its overlying lateritic profile has been eroded, leaving some ridges capped with laterite rising 360 m above the surrounding countryside. Veins of chrysoprase, usually less than 8 cm. wide, are located in the upper slopes of these ridges.

Chrysoprase occurs primarily in the saprolitic zone - up to 70 m. thick - within the complex. The saprolitic zone is overlain by a ferruginous silicified cap - 14 to 30 m. thick - containing limited quantities of chrysoprase of inferior quality. Below the transition zone between the saprolitic zone and its underlying serpentinite, nodules of chrysoprase occur in an environment rich in magnesium. Within the saprolitic zone, steeply dipping flat veins of chrysoprase form a boxlike network with veins of colorless to white quartz, chalcedony and common opal. Chrysoprase of gem quality forms a small proportion of the total vein material. The ratio chrysoprase:quartz+chalcedony+opal is approx. 1:8. It has been noted that good quality chrysoprase is frequently associated with manganese oxides and magnesite.

The veins and nodules of chrysoprase are frequently flawed; cracks and defects frequently are filled with adherent limonitic materials. Some attractive mineral specimens, of little value as jewelry, can be obtained from vugs in the chrysoprase, which are frequently lined with drusy quartz crystals. Additionally, each side of a chrysoprase vein is covered by an opaque white "skin" that grades into the gem material. Despite the relatively frequent occurrence of flaws, vugs and extreme oxidation, a considerable proportion of the chrysoprase mined is of marketable quality.

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CHRYSOPRASE (continued)

Mineralogically, gem quality chrysoprase tends to cnosist of microgranular quartz rather than fibrous chalcedony. The bright apple green color of translucent gem quality chrysoprase has been attributed to the allochromatic inclusion of up to 3% nickel silicate. The nickel chromophore is certainly responsible for the production of a wide variety of green hues. Recent studies, however, have isolated a second chromophore:manganese. It is now accepted that the opaque, oily leek green colors of the less valuable chrysoprase are due to the included manganese content. Further investigations to substantiate this observation are proceeding at the Queensland Mines Department.

Chrysoprase from Marlborough is mined by benching - a variant of open cut mining. Bulldozer cuts are made along the side of the ridge to expose the tops of the chrysoprase veins. Workmen walk behind the bulldozer to visually locate the severed veins of chrysoprase. Once located, a mechanical digger is used to scoop out as much of the vein as possible. The mined chrysoprase is piled up adjacent to the excavation. Rough is graded on the site before being packaged for export. Overburden from the bulldozer cuts is pushed over the edge of the ridge; considerable chrysoprase tends to be mixed with the overburden. To date, 20 to 30 m. of the saprolitic zone has been mined at two separate mining leases.

With the exception of a small scale chrysoprase cutting and polishing industry established in Rockhampton by one of the lesees, all the chrysoprase mined is exported, as rough, to Japan, Hong Kong and Germany. Finished chrysoprase is imported into Australia from these overseas-based cutters. While the estimated value of the chrysoprase production is rather modest, the quality of the product is excellent and its financial return to the owners of the mines is increasing. During 1976 the two operating mines produced 70 tons of chrysoprase having an estimated value of $175,293. One mine ceased production during 1977, resulting in a decreased total production of 27 tons valued at $186,000. Production figures for 1978 should be substantially improved, since both mines are now back in production.

Chrysoprase is mined in other regions of Australia: Northwestern South Australia and the Gascoyne District of Western Australia. However, these mines should not be considered to be viable commercial propositions, since neither the quality nor the quantity of chrysoprase mined can approach that produced by the mines of the Marlborough Creek area. On eht world market, Marlborough chrysoprase is highly regarded. Since a large reserve exists one would hope that the Commonwealth Government of Australia will stimulate the development of an economically profitable, viable cutting and polishing industry to complement the already-established mining industry.

REFERENCES:

Brooks, J.H. (1964) Marlborough Creek chrysoprase deposits. Quld. Govt. Min. J., 65, 135.
Robertson, A.D. (1976) Chrysoprase. (in) Economic Geology of Australia and Papua New Guinea. No. 4, Industrial Rocks and Minerals, AIMM, Sydney.
Woods, J.T. (1978) Mineral Industry Review. Qunsld. Govt. Min. J., 79, 283.

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OBSERVATIONS ON FACETING TOURMALINES by James L. Semmes, Jr. (Gem.)

Over the years I have faceted literally hubdreds of carats of rough gem tourmaline from all portions of the world, and I have found some very interesting differences in material from different locales (from a cutter's point of view). Handling these gemstones or placing them in settings requires knowledge of the specific properties of the materials in order to avoid damage and, in the case of faceting, successful processing of the material in all cutting stages. My observations should not be considered in the same light as a laboratory evaluation of properties, but rather as the notes of a gem cutter.

We are all aware that tourmalines are very heat sensitive, somewhat brittle, and occur in a variety of colors, including some very spectacular bicolor material. The reaction of tourmaline to cutting and setting is tabulated below according to color and locality.

(continued)

TOURMALINE - continued

AFRICA: Chrome green tourmaline can accept standard doppint procedures provided that the wax used is not allowed to get too hot. The stones do not appear brittle in cutting, and can be set rather easily, provided a knife girdle is not present. The yellow, gold and golden-brown tourmalines are a different story; I have found that the crystals may shatter easily on cutting (splitting across the crystal) even though epoxy was used as a dopping adhesive and faceting was done on fine-grit laps. Other colors appear stable, and no problems have been encountered with them.

BRAZIL: Most of the green tourmalines are best dopped using an epoxy-type adhesive. The greens appear to be rather heat sensitive and should be handled with care. If a ring containing a green tourmaline has to be sized, the stone should be removed prior to sizing, or a heat shield applied to prevent breakage. Bicolor stones are also heat sensitive and should be handled in the same fashion. Cutting of bicolors should be done on 600 grit laps using lukewarm water and detergent as a lubricant; olive oil may also be used. The tendency is for a gem to develop a crack along the line separating the color zones if coarse grit laps are used. Blues and pinks are very easily handled and present no problems.

PAKISTAN/AFGHANISTAN: I have faceted many carats of material from these locations and can conclusively state that Pakistani material is far more stable and durable than Afghan tourmaline. Both localities yield material that is more sensitive in nature than tourmaline from Brazil, and the colors are also somewhat different;the former are a bit more on the pastel side, though I have seen blue, green and blue-green gems that are every bit as lovely as comparable Brazilian stones. Bicolors come in just about every conceivable combination. All tourmalines from these localities should be faceted with great care. Laps of 600 grit or finer should be used and the stones dopped with epoxy, rather than wax. In setting, avoid all stones with girdles that are thin, as they will chip and break easily. Bicolors are extremely difficult to finish without cracks along the color separation lines, and dopping such a crystal may well result in breakage. I had one stone crack in half from the heat of a 40-watt bulb on my cutting bench!

U.S.A. : The two areas of concern are California (Himalaya Mine) and Maine (Newry). Once again, I can state that, from my experience, the California stones are more stable in nature and more durable than the Maine material, and are easier to handle in all stages of cutting and setting. The cranberry-red or brownish-red Newry material is especially sensitive and should be handled with great care.

SUMMATION: In CUTTING tourmaline, unless you have a lot of experience and know the origin of the material, dop with epoxy or a cyanoacrylate. Coat the base of the dop and the stone with fingernail polish to keep oil or water from breaking the bond. Preforming all solid colors can be done on 260 laps, and the main facets can be cut on the same grit. Bicolors should never be cut on anything coarser than 600 grit, and preferably 1200. Polishing is rapid and easy on Tin using Linde-"A" or Tin and 14,000 diamond. Many other combinations are also effective.

In SETTING tourmaline, it is best to have all of the necessary work completed prior to setting the stone, including sizing of the ring. The prongs to hold the center stone should be shaped prior to bending over the girdle, and should be of a thickness suitable to allow bending without a great deal of pressure. After bending the prongs, I usually employ a flat graver to push some metal additionally to prevent snagging. Do not file the prongs after bending or you will seriously abrade the gemstone.

in PURCHASING tourmaline, especially bicolor gems, look very carefully at the cutting quality, especially in the thickness of the girdle. If you plan to have the stone set, a thin girdle will result in a broken or damaged stone. In bicolored material, any crack at a color junction could result in a broken stone if too much pressure is applied during setting, or if the stone is dropped or struck. The material does not have to be flawless, but examine the type of inclusion and plan whether cutting quality will affect what you want to do with the stone, and if it can be worn without damage. Be careful with tourmalines and they will give you many years of pleasure.

MORE COMMENTS

The following from Barry Fixler (GG) back in 9/78, asked to print in Newsletter:

"You better believe the AGA fulfills an essential service to its fellow gemologists and colleagues. I still have a bad taste for the American Gem Society. When I received my GG from the GIA I applied to the AGS but they turned me down. I wanted to become a CG; however, I was not eligible because I am not employed by a member store of the AGS. I was appalled!"

Also from Barry Fixler:

Recently I encountered two good emerald triplets. Both imitations were set in two different lady's fancy rings with at least 2.00 carats of diamond mellee in the mountings. These green stones proved deceptive because the junction between the layers was hidden by the settings.

One stone had a top layer of green material with R.I. 1.57-1.580. Synthetic emerald inclusions were seen at 20X with a darkfield 'scope (wispy veils, flux fingerprints) in the bottom half of the triplet. The center layer was a green cement with gas bubbles. This stone was inert in UV light (both LW and SW). A second stone was synthetic emerald on top (wispy veils) and colorless material on the bottom.

Question: Why would one go through the trouble of using synthetic emerald in a triplet??? Can I be wrong?

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MORE ON AGS from E.A. "Ted" Brockie in Fort Frances, Ontario, Canada. Ted is a C.G. so the following comments are certainly not to be ignored: (from letter of 10/78)

"I was glad to see the exposure of AGA in a recent JC-K. For some time now I've been advising the AGS ex. director that we (AGS) must stop allowing (and therefore underwriting) a 20% error factor in obtaining the R.J. title. Furthermore, I've indicated that much-increased educational info. is required or else a lot of more-motivated C.G.-s will likely swing over completely to an organization that does provide this highly necessary info. I'm not at all surprised that it was almost exclusively RECENT GIA grads who wanted the annual questionnaire beefed up to "become" an annual examination "per se". I would be embarrassed to have to show that little questionnaire as the major means by which I re-won my title annually from an educational standpoint. I appreciate the difficulties that Mr. Woodill MUST have, i.e. long-time staunch supporters without whom the AGS mightn't have survived, who might be content to coast a bit. However, new developments in gems no longer allow the status quo to remain unchanged much longer."

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The following notes extracted and condensed from SIMMONS PRECIOUS METALLETER:

Gold prices down after Paul Volcker's appointment to Fed. Reserve Board. Confidence then declined, prices spurted upwards. The force of the upward move startled everyone, even seasoned traders. Eliot Janeway attributed Andy Young resignation as accelerating Arab buying panic and indicated that a strong U.S. government (obviously not the current administration) would signal bearishness on gold. All of this is supported by move of Dresdner Bank (speculated as main instrument for Arab gold buying) to buy 720,000 oz. at U.S. Treasury auction in August; this helped push up prices and "tailgating" by other buyers fed the market climb. Experts continue to agree that upward movements in gold herald a weakening of western democracies and calpitalism.

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CURRENCY QUOTES AND EXCHANGE RATES 9/24/79

DEUTSCHMARK = 57.5¢ SWISS FRANC = 65¢ JAPANESE YEN = .0047¢ = 212.76/$

POUND STERLING = $2.22 GOLD = $377 SILVER = $17.85