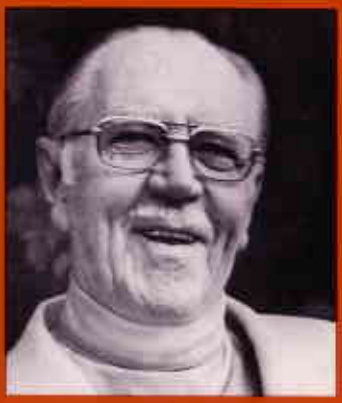
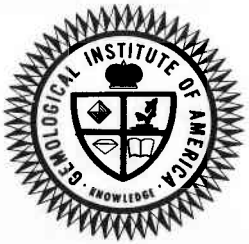
Gems & Gemology



In Memory of
ROBERT M. SHIPLEY

GIA

SUMMER 1978



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Gems & Gemology

VOLUME XVI *NUMBER 2*

SUMMER 1978

ROBERT M. SHIPLEY MEMORIAL ISSUE

EDITOR'S COMMENT

The summer issue of GIA's quarterly publication, Gems & Gemology, is dedicated to the memory of Robert M. Shipley, the founder of the Gemological Institute of America, and the original editor and publisher of Gems & Gemology, which first began publication in 1934. The last issue of this quarterly magazine contained an obituary of Robert M. Shipley, recording his passing at the age of 91, on April 18th, 1978.

So much has been written chronicling his activities and his accomplishments in a glorious life span, that no more needs to be said in that regard in this issue. Instead, we have asked many who knew Robert M. Shipley well to relate anecdotes that would bring those who did not have the opportunity to know him a bit closer to the man who gave so much to the jewelry industry in America, and abroad.

Richard T. Liddicoat, Jr.

MEMORIES OF ROBERT M. SHIPLEY

Founder of the Gemological Institute of America and American Gem Society

Some Memories of Robert M. Shipley

By ALFRED L. WOODILL
Executive Director,
American Gem Society

Writing about Mr. Shipley involves a family, a business, and a personal relationship dating back to 1929 or 1930. Shipley met my aunt, Beatrice Woodill Bell, in Paris, France while both were taking art classes. He followed her back to Los Angeles, where they were married – the second marriage for both.

Shipley launched the GIA in 1931 as a partnership with his wife. He then commenced the AGS in 1934. As for me, I first worked for the GIA/AGS office during my high school and early college years. The work was part-time, on and off, and might be nights, weekends, or vacations. The standout memories of those days were much conditioned by the times of the Great Depression of the 1930's. It was a 48-hour week, no coffee breaks, absolute punctuality, and a withering glance or verbal lacing by either of the Shipleys for sloppy work.

The Shipleys lived in, or adjacent to, the GIA offices throughout their careers. They added a weekend home in Laguna Beach in 1935; but business was a 24-hour, 7-day-a-week involvement. Both of them had the unusual ability to keep their several interests in art, music, books, family and business all going at the same time. Mr. Shipley, especially, was adept at vigorously working anywhere, anytime that suited him. On a family gathering, or weekend at the beach, he could break

Shipley as a Wisconsin military academy cadet., ca 1905.

Shipley in the early 1920's.

off, write, read, answer mail, or whatever, and then rejoin the festivities. The two of them were quite charming and their varied pursuits and travels made them excellent company and relatives.

Shipley's thinking and working habits were circuitous. To get from business point "A" to business point "B" involved all sorts of twists and turns and mental gymnastics. The late and very talented, Jerry Wiss, C.G., the developer of the Wiss Jewelry firm in New Jersey, was an ardent and active supporter. Jerry admiringly referred to Shipley as Confucius–to include the idea of confusion.

Shipley's memory and recall ability were always exceptional. His knowledge of U.S. geography was likewise. A little over a year ago, at 90, he was sitting in Liddicoat's GIA office. Dick finished a phone conversation and stated the caller was one of his former students – John Penn Fix. Shipley would have had no reason to have heard or seen that name in his 25 years of retirement, yet his immediate response was – "I never did visit Spokane" (Jack Fix's home city).

Both Mr. and Mrs. Shipley had what might be referred to as a "good guy" – "bad-guy" syndrome. Those on the staff, jewelers in the AGS, and those out in the industry – all seemed to be either on a pedestal, or going in, or coming out of the dog house. All positions were transitory. I remember one morning in the late 40's asking co-worker Bill Collison, CG (now in Philadelphia), how he was. Bill said, "I don't know, I haven't seen him yet."

After World War II, the AGS and GIA obtained separate offices. I worked with Shipley a great deal until his retirement in 1952 – and of course, was in constant contact with him, through the family, until his death. He had a vision for the retail jeweler, and he had an extensive background in the industry tempered by both success and failure. He had many qualities of the artist, and he had the education and intellect to pursue and carry out his goals. He was very creative, and a hard worker. He was also tall, handsome and a good salesman when he wanted to be. All of these qualities, developed during the pressure cooker of the depression years, produced an amazing individual.

As inferred previously, Shipley could be tough to work for and quite cantankerous. There were many ups and downs and he rubbed some people the wrong way. However, few of us ever have the opportunity to know and work with a truly outstanding individual! One who from scratch creates in his lifetime something valu-

able that was not there before; and one who leaves the people he knew and the business world he lived in much better off because of his presence. Those of us who knew and worked with Robert M. Shipley have been most fortunate.

Some Memories of the Early Days of Robert M. Shipley

By EDWARD B. TIFFANY
Henry Birks and Sons, Limited
Toronto, Canada

I believe that Lovell Baker, Ken Mappin and I were the three "Canadian Originals" in Montreal to fall under the spell of R.M.S. when he came up to Canada in the early thirties. He was so imbued with the gemological gospel, and presented it so enthusiastically and dramatically that we were really excited with the whole idea. His words fell on very fertile soil as we were eager to add to the comparatively meager knowledge we had acquired in a practical way in the jewelry business. I think he was amazed and relieved at the ease with which he succeeded with us, as he had just gone through the wringer with the New York dealers who had given him a particularly hard time, and he was pretty well worn out. Personally, I had always been interested in gemstones and had read and studied most of the available literature such as Bauer, Herbert Smith, Dana, Kraus and Slawson etc., and also struggled experimentally on my own. It was a delight to progress in the earlier courses to R.J. and go on to work a week with Dr. Wigglesworth and take the C.G. stone exam in Boston. In those days the papers were sent to L.A. and the results mailed out from there. I had to wait about three months for the verdict. One kind soul suggested it probably took that long to decipher my writing!

The early conclaves were especially memorable, probably because of their novelty. The groups were much

From Left to Right George Houston, James G. Donavan, Jr., Robert M. Shipley, John Vondey and Alfred Woodill.

smaller and personal tuition was much easier. There was always an instrument shortage, as some of the present ones were not yet developed. I was an instructor for several years, and now shudder to realize how much knowledge we have acquired since those days. Fortunately, however, most of the students were less knowledgeable so it was not too apparent. Probably most of the present members do not realize or appreciate the contribution that Bob Shipley, Jr., made to the movement with his scientific knowledge and efforts in the instrument field. He did excellent work.

Among the regular participants there were several who definitely could be described as "characters." They added considerable comedy to a very serious group. The bull sessions in some of the members' rooms after the regular meetings were really quite historical (or should I say hysterical)! It would be manifestly unfair to single out for special mention any from the host of the lovable, dedicated people who participated, but the older members will surely recall many of the incidents.

R.M.S. attended many of the meetings and offered his comments and advice. One particularly tough assignment was on color, a subject on which he was most emphatic. Exact color description obviously is practically impossible, and he had a series of color swatches which did help somewhat, and about which was much controversy and discussion. He revelled in it. He took a firm stand on all his ideas regardless of opposition, which at times could be very heated.

The conclaves which originated in the East have spread across the continent and have done much to cement relationships among the industry, as well as affording many members and their families the opportunity to broaden their travel experience.

The passing of R. M. S. marks the end of an era. He was such a vital force, and almost single handedly started the gemological movement in America, which with the assistance of his wife and many dedicated and energetic persons, has elevated gemology to the status of a profession recognized, honored and respected throughout the world. How happy and fortunate that he was able to see the results of his life work so wonderfully brought to fruition.

We now go on to further developments. Scientific research will undoubtedly reveal more of nature's mysteries, and world-wide explorations discover new gem sources. We must keep abreast of the future, and are fortunate that the leadership of both the Institute and society are in such imaginative and capable hands.

Robert M. Shipley with Dorothy Jasper., ca 1934.

Remembering Robert M. Shipley

By HANS J. BAGGE, C.G.
Los Angeles, CA

My personal experience with Robert Shipley goes back to about 1933 when he came to Chicago and interested H. Paul Juergens and myself in taking his Gem Course. There is a little story connected with my taking the gem course, and I feel it gives a little insight into Robert Shipley's character and integrity.

Bob was in the retail jewelry business in Kansas and because of the times, was just not able to make it financially. When he closed out he owed my firm, J. Milhening, Inc., an indebtedness which he was unable to pay. When he came to Chicago in 1933 he offered Frank Milhening two complete courses in lieu of this indebtedness and his offer was accepted. Frank Milhening gave one of them to our office manager Henry Brookstra and the other to me. Brookstra never finished, but I went on to take the complete course, the written and stone examinations (with H. Paul Juergens) and received CG title #7 on Oct. 16, 1935. We founded the Chicago Chapter of the AGS in 1935 (H. Paul Juergens was President and I was secretary for the next ten years). Whenever Bob Shipley came to Chicago we made sure he was our featured speaker as we were sure to sign up additional prospective students.

When we held the First Annual Gemological Conclave in Chicago in 1937 at the Stevens Hotel, it was hosted by the Chicago Guild, and directed by H. Paul Juergens and myself. Bob naturally came to Chicago and spoke at several of the sessions. He also attended our subsequent conclaves in 1938, 1939 and 1940. President H. Paul Juergens was our master of ceremonies at these first conclaves, and he continued for many years to come.

One of my prize possessions is a Christmas letter I received from Robert Shipley in December 1937 naming me as one of the 12 people in the United States who had contributed the most to the development of the gemological movement during the year 1937. I think a lot of the success of our gemological movement was due to Bob Shipley's interesting the two major retail research groups of that period in the study of gemology. No. 1 was composed of 12 leading jewelers such as J.B. Hudson Co., of Minneapolis, MN., C.B. Brown Co., Omaha, NE., C.I. Josephson Moline, IL., Wright-Kay Co., of Detroit, MI., Frank Herschede Co., Cincinnati, OH., Hardy & Hayes Co., Pittsburgh, PA., and others. Retail Research Group No. 2 was composed of 22 or 23 stores of which Donavan & Seamans Co., and Broer-Freeman Co., were members. These groups got together periodically to exchange pertinent and confidential information. With their support and interest, the gem movement was able to make great strides.

When I came to California in 1945 and assisted in reorganizing the then disbanded Los Angeles Guild of the AGS I had a chance to see Bob

occasionally and was pleasantly surprised at his continued enthusiasm. Robert Shipley was an unusual individual. He had a certain dignity about him that was to be admired. Fundamentally I always felt he was very sound, and while on occasion he had a hard time expressing himself correctly, he did have the ability to sell everyone on the need of gemological education. Certainly the thousands of students who have come through the GIA should send up a special prayer for him for starting the gemological movement and putting our industry on a truly professional basis. I am very glad that he came along during my lifetime.

Robert M. Shipley

By DOROTHY JASPER SMITH
Desert Hot Springs, California

December, 1932 ... That seems a long time ago and it was. But, that was when I first became associated with Mr. and Mrs. Robert M. Shipley in the early stages of the development of the Gemological Institute of America. Mr. Shipley had taken the suggestion of his lecture students at the University of Southern California and had started writing the correspondence courses. However, he had gone further and was building the foundation for what was to become a vital force in the jewelry industry throughout the world.

R. M. S. was not only planning the correspondence courses in the Science of Gemstones but he had also called on important firms throughout the jewelry industry, many of them members of the Jewelers' Research Group and the ANRJA, friends of long standing. With his super-salesman powers, he sold them on his idea and many of them became Sustaining Member Firms of the GIA. In addition, he called on or wrote to leading educators throughout the world and secured their support and assistance in checking the material he was presenting in the lessons. Even our early Boards of Governors, Educational Advisory Boards and Examination Standards Boards were represented by leading jewelers and educators. This gave him the backing, both in prestige and money, that he needed to go on with his dream of educating jewelers and putting them on a professional basis.

At the time I started, the "headquarters" were located in a studio apartment on West Sixth Street and

Oscar Homann, Mrs. Shipley, and Clifford Josephson at a Board of Governors dinner in the 1940's.

Alexandria in Los Angeles which was also being used by Mrs. Shipley for her business. All space served a dual purpose: the bedroom was also Mr. Shipley's office; the large studio room was the GIA office and shipping room and space for Mrs. Shipley's art shows, lectures and book reviews. Needless to say, on an afternoon of a book review, we did a bit of shifting around. At about 8 A.M. the cornflakes and coffee disappeared from the kitchen counters and were replaced by the methylene iodide and other gem testing materials and, again in the evening, these were replaced by the ingredients of the day's dinner. The eating area was the printing shop in non-eating hours.

Mr. Shipley was busy writing and rewriting and rewriting the correspondence course assignments. Betty, the other employee, and I would type, retype and retype until it was time to cut stencils to run off on our small mimeograph machine. I believe we made 35 copies on the first run. It was quite a sight to see us gathering the pages of an assignment spread out on the floor with Mr. and Mrs. Shipley helping with the checking and stapling. Everything was a community effort.

Shipley at his desk at 541 South Alexandria about 1947.

We had a few eager-beaver students who kept us hopping, because they would finish assignments faster than we could get them ready. We would mail them out, and, before we knew it, the completed questionnaires would be returned to us for grading. (The mail service was a bit better in those days.) Among the early students who kept us hustling was Fred Thurber of Providence, who became the first CG, Milton Gravender of Minneapolis and Richard Van Esselstyn of New York City, who even hand delivered his questionnaires one day after a flight from New York to Los Angeles, not a

Robert M. Shipley with Heywood Macomber and the late John Kennard of Boston, ca 1939.

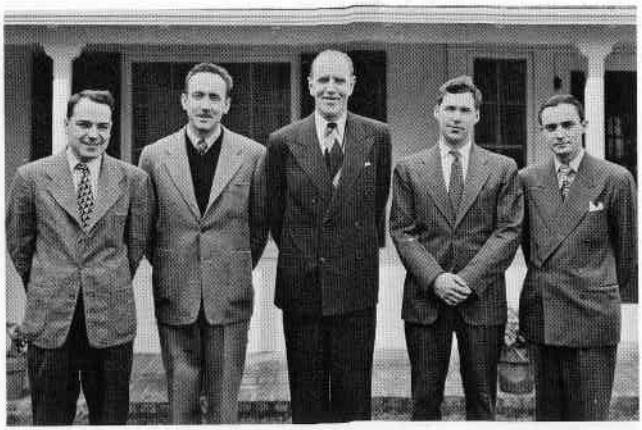
Shipley presenting an expression of appreciation for long service to the late Fred J. Cannon., ca 1948.

common practice in those days. These gentlemen, among others, gave Mr. Shipley an extra impetus to complete his educational program.

After Mr. Shipley had spent part of his time working on the courses and part in successful travels to line up new students, it was necessary to begin expansion and the GIA took over exclusive use of the studio apartment. New employees were added and a shipping department established. Among the early employees were Mrs. Isabel Blanchard, Mrs. "B" to us, Dorothy Phebus and Clare Verdera. Shortly after I started, Robert Shipley, Jr. joined us and was of great assistance to his dad in research for the courses and particularly in his tremendous ability in developing tests and testing equipment.

Anyone who had the opportunity to know Mr. Shipley personally could not help but join in his enthusiasm and dedication to what he was doing. As mentioned before, he was a super-salesman but he was also sold on his subject. He had a dream and he was determined to see it develop. He was, I know, astounded at the proportions to which the GIA grew and became important in the industry. Mrs. Shipley was the counterpart he needed to keep things on an even keel. It took the two of them to really set the foundation upon which great advancement could be made.

In 1934 R. M. S. further developed his idea of professionalizing the jewelry industry by establishing the American Gem Society and introduc-



In front of the GIA at 541 South Alexandria. From the left, Richard T. Liddicoat, Robert Shipley, Jr., Robert M. Shipley, George Switzer, Ph.D., and Loyal Clark.

ing a code of ethics and educational standards for members. The Registered Jeweler and Certified Gemologist titles became AGS titles. During the early years of the AGS, he was Director of both AGS and GIA. Later he withdrew from the AGS and they became a separate entity with separate offices and personnel.

Until 1942 the GIA was operated as a partnership of Mr. and Mrs. Shipley. At this time, Mr. Shipley further realized a part of his dream of education for jewelers and they turned the control of the GIA over to the industry. The educational facilities were available to anyone. Mr. Shipley remained as Director of the Institute until his retirement in 1952.

To offer even more thorough training, Mr. Shipley introduced the first resident class in 1937. This was the forerunner of the current extensive resident training. Among the early attendees were Dr. Edward Gubelin of Lucerne, Leo Kahn of Manila and Jose Beltri of Mexico City. Among other visitors to the Los Angeles offices in the early days were Dr. Edward Wigglesworth, Director of the New England Museum of Natural History and first President of the GIA as a corporation and Dr. Ralph Holmes of Columbia University. Both of these gentlemen were extremely valuable as consultants.

The GIA continued its growth and in 1939 moved from the studio apartment to the new headquarters on South Alexandria in Los Angeles. This was "heaven" to us who had worked in the smaller space and it seemed it could never be outgrown. However,

Robert M. Shipley at the time of retirement in 1952.

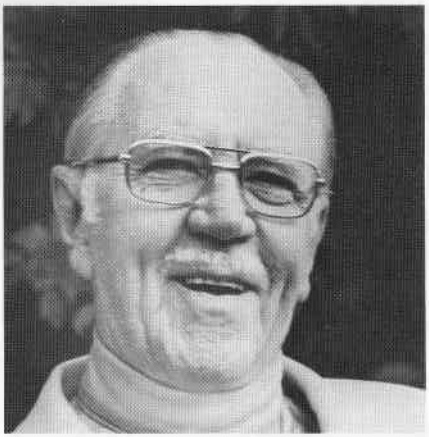
after WW II, it was necessary to rent additional space for the offices of *Gems & Gemology* and to hold classes and by 1955 another move was made to larger quarters in Brentwood.

Mr. Shipley lived to see his dream flourish and I know he was extremely proud and especially appreciative of the support that had been given to him throughout the years by members of the industry and by the employees who worked diligently for him. He and Mrs. Shipley worked together and surely shared the laurels.

The Crusader in The Trench Coat

By ELLEARD B. HEFFERN
Elleard B. Heffern, Inc.
St. Louis, Missouri

It was a hot, muggy August afternoon in St. Louis, the summer of 1937 (2 years before our old family store, Heffern-Neuhoff Jewelry Co., was air-



Robert M. Shipley at the age of 90.

conditioned), when a harried, worn-out man with a craggy, leonine head appeared at the door of the store.

His trench-coat was hardly impressive, but his voice had a mellowness to it as he asked to talk to my father. Dad listened to his story with a courtly politeness which soon warmed to interest as the handsome thesis was intoned.

I joined the conversation and listened as Bob Shipley told us of a new educational and professional organization for gem specialists and jewelers.

As our enthusiasm grew, the zealot's eyes were flashing and the battle-weary trench-coat became a coat of mail with a lion rampant emblazoned on the breast plate. Henry V, on the eve of Agincourt, had issued his challenge.

We enlisted on the spot. I have not had cause to regret this decision. The many hours spent on study of the GIA courses have proven most fruitful. It has been great to be a part of the AGS and the GIA as they have grown in reputation.

You will recall the days when loving parents hastened to have their baby's first shoes "bronzed." It occurs to me that an appropriate memorial to Bob Shipley would be to have this old trench-coat "bronzed" and retired in dignity in the GIA trophy room.

Early Memories

By EUNICE R. MILES, Instructor
Gemological Institute of America
New York, New York

My first impression of Mr. Robert Shipley was that of a tall, stately, middle-aged gentleman, endowed with enthusiasm which wanted to burst out from under his sophisticated reserve. Bob Shipley came to Boston in the late 30's. His mission was to introduce his dream of developing an educational course in colored stones for the jeweler to Dr. Edward Wigglesworth who was then Director of the Boston Society of Natural History and Curator of the Mineral and Gem Department of the museum.

I was his assistant.

Edward Wigglesworth and Bob Shipley had immediate mutual admiration for each other. They were both men of integrity and ideals who were working for the good of their fellow man. Dr. Wigglesworth had founded a school for farm boys. Immediately, these two gentlemen had another common bond between them. Each of them had been interested in developing needed educational institutions for specific trades.

It took little persuasion from Bob


February 18, 1977. Robert M. Shipley and Richard T. Liddicoat, Jr., at a reception held by the GIA Board and Staff in honor of Mr. Shipley on his 90th birthday three days before the event.

Shipley to convince Dr. Wigglesworth that a colored stone course was needed for the jeweler. He agreed to check the contents of the first colored stone course in gemology. I ran questions and answers back and forth between the Mineralogy Department of M.I.T., where I was a student, and the Mineralogy Department at the museum.

Bob Shipley traveled throughout New England recruiting outstanding jewelers to join his gemological movement. The late John Kennard, who was President of Hodgson Kennard, invited me, "the child scientist" as they called me, to my first AGS Conclave in the Spring of '38. It was exciting to look at gems under the Diamondscope. Bob Shipley was a keen observer and sensed my enthusiasm. He asked me if I would like to study gemology. Wow, would I! So I was allowed to use Dr. Wigglesworth's assignments and instruments at the museum. Every spare minute I had, I studied different mineral and gem specimens in the museum's collection. Both gentlemen believed that one should pay even a small amount for anything you valued. So I was asked to pay $3.00 per month. I was launched on my new career.

A few years later, Bob Shipley opened the first Eastern Headquarters of the AGS/GIA in Boston, with Dr. Wigglesworth as its Director. Mr. Shipley selected Boston because it was a renowned educational center, and he wanted his dream to be nurtured on a cultural and educational foundation. Although then, as now, New York was the pulsating heart of the jewelry industry in America, Bob Shipley believed that the New York Diamond Trade, with profit as its primary motivation, would strangle his educational gemological movement. He felt that the Institute must become well established before being moved to New York City.

The New England AGS Guild was formed and the American Gem Society grew in stature in Boston until Dr. Wigglesworth's death. Three years later, Bob Shipley moved the AGS/GIA Eastern Headquarters to 5 East

Robert M. Shipley with GIA Governor George Sloan.

Robert M. Shipley with GIA Board Chairman Arthur F. Gleim.

47th Street in New York City. He brought Richard T. Liddicoat, Jr. and his lovely wife Gene, east from California to open the new Eastern Headquarters. Mr. Liddicoat was appointed Director.

Mr. Shipley's influence and enthusiasm were contagious and the organization continued to grow. There was much resistance at first because he was eliminating "CHANCE" from the jewelry industry. This had been a built-in factor, "taking a chance to make a profit."

Bob Shipley had a healthy attitude towards women. He treated them with respect and welcomed and encouraged them as active working members into the study of gemology. He realized the potential women had to strengthen the science. He gave women a chance for creative expression and young jewelers the opportunity for becoming professionals.

Mr. Shipley had the cooperation of his wife, Beatrice, who worked untiringly with Bob, starting in their home as their first office, and his son, Bob Shipley, Jr., who designed some of the earliest gem testing instruments. It was a family organization which in itself had an appeal for the jeweler who for generations has been family business oriented. Bob Shipley left a heritage for all of us to perpetuate and cherish.

Mr. Robert M. Shipley

By RICHARD T. LIDDICOAT, JR.,
PRESIDENT
Gemological Institute of America

Robert M. Shipley was a remarkable man in many ways. It was a great opportunity to have had the chance to work for him and with him for 12 years.

I was studying mineralogy in the graduate school at the University of Michigan and never had heard of the Gemological Institute of America until one day when the late Professor Chester B. Slawson showed me a letter he had received from Robert Shipley telling of an opening for a mineralogist at GIA in Los Angeles. Professor Slawson did not expect me to be interested, because I was mid-way in my studies leading to a Ph.D. and a

probable teaching career. However, it came at just the right time, so I got in touch with Mr. Shipley and drove from Ann Arbor to Cincinnati to meet him and Mrs. Shipley as they passed through. I'll never forget how impressed my wife and I were by the Shipleys. The tall, distinguished pair were unforgettable. Edward Herschede then was Chairman of the Board of Governors. We met at his store, the Frank Herschede Company in Cincinnati.

Shipley inspired awe on the part of the staff, because he was such an imposing figure of a man and his knowledge of the jewelry industry was encyclopedic. Likewise, Mrs. Shipley, who worked with him and in effect, managed the office, awed the women on the administrative staff. Mr. Shipley was one of the few people in my memory who wore pince-nez glasses. He used them effectively in his conversations with people. He would remove them from the bridge of his nose, gesticulate with them, and then drop them in his lap to emphasize a point. Listeners responded.

In all the time I knew him, I don't remember an occasion during the time he directed GIA in which Robert Shipley sent a letter by regular mail. Everything was air mail, special delivery. His early experiences with New York suppliers, who generally were anti-gemology, made him most wary about some of the activities of various individuals. He saw danger in almost everything that happened. People were plotting. Thus, we always were engaged in some sort of a battle to prevent certain events from taking place. It would have to be determined who might have the most influence with some recalcitrant who was up to no good. This would involve a batch of special delivery letters and phone calls to counteract whatever was under way.

In the early days of the Institute, Shipley was exceedingly busy, because he had to write the courses as well as sell them. He traveled much of the time. He was famous for catching a Santa Fe or Union Pacific streamliner as it was starting to move out of the station. On a few occasions he had to be driven, at breakneck speed, the 60 miles to San Bernardino to catch up with the train.

I recall vividly, one occasion when the late Dean Edward H. Kraus, who at that time was the honorary president of the Institute, made a visit to Los Angeles. It was in 1947. At that time, Dean Kraus was in his seventies. By the time RMS, who had many things to discuss with the Dean right up to the last minute, got into the station, Shipley had to run and throw the Dean's luggage on a vestibule and the late Dean barely made it aboard the moving train.

One time, the Shipleys were leaving for the station and the entire staff was out on the lawn beside the driveway at 541 South Alexandria to see them off. One of the girls, the bookkeeper, said to Mr. S., "You have your tickets?" He patted his pockets and then searched his heavily loaded briefcase. No tickets. A frantic search of his office, luggage, briefcase, etc., ensued, but failed to turn up the tickets; they had to make a last minute dash to

Shipley with Alfred Woodill and Richard Liddicoat enjoying a laugh at his 1977 reception at GIA.

the Union Station sans tickets. The tickets never did turn up and I suspected that whoever found them decided that it was the better part of valor to just forget it.

Late in 1946, enrollments were increasing slightly and the G.I. Bill came along. Shipley's initial reaction was that this was not a good idea for GIA, because it would involve a great deal of government interference. He had to be persuaded that perhaps it was worth a try. Under the G.I. Bill, GIA grew very rapidly, and, at the peak, when an enormous number enrolled in the first six months of 1951, the staff was at a larger size than it was to see for several more years.

Robert M. Shipley autographs a student's workbook.

During that busy time, we started to use more and more of the space that had been built for expansion in the apartment house at 541 South Alexandria. It got down to the point where Robert Shipley, who had occupied the largest apartment, had only a bedroom left on the second floor, and we really needed that to find room for the new people on the staff. For many years, Mr. and Mrs. Shipley had gone to their beautiful home on a cliff overlooking the ocean in South Laguna, California, for every weekend. With his retirement approaching, Robert M. had begun to go down in the middle of the week, as well as on the weekends. Mrs. Shipley long since had moved to the Beach. One time when he returned to Los Angeles, he found his bedroom occupied by staff. Les Benson and Ken Moore had decided that they just had to move desks into it (I was out of town at the time), and I've laughed ever since at Les and Ken's story of his indignation when Robert M. Shipley found that there were desks in the bedroom, and nothing but a small single bed was left for him.

These are a few of the lighter moments that occurred over a long period of association with a man I admired and enjoyed.

Robert M. Shipley was a truly outstanding individual. I am thankful to have had the opportunity to know him and to work with him for more than a decade.

Plastic Impregnated Gem Opal

By D. VINCENT MANSON, Ph.D.
Director of Research
Gemological Institute of America

Introduction

The "play of color" shown by gem opal is a beautiful and distinctive characteristic such that fine opal has over long periods of time kept its position as an appreciated and popular stone in the gem markets of the world. In the late 1960's, the unique structural characteristics of opal were determined, leading to an understanding of the cause of play of color in gem opal. Inevitably, researchers began experimenting with the reproduction of this phenomenon in synthetic materials. The most successful of these efforts became apparent with the introduction by Pierre Gilson of his spectacular synthetic milky and black opal in the early 1970's. To a variable degree, both natural opal and this synthetic material have a tendency to develop cracks and also, in some instances, to lose their beautiful translucency as they lose water. Many individuals have made numerous efforts of one kind or another to overcome these problems by stabilization processes. Their intent was to seal the opal from drying out and/or to neutralize or remove any strain within the stone.

Recently, such efforts have resulted in a new material appearing in the market place. It consists of Brazilian opal in which the interstitial voids have been inpregnated with a plastic resin. In some specimens, the addition of a dark dye-like material gives an appearance closely resembling Australian black opal. The description of this material is the principal subject of this report.

Gem Opal

The special characteristics of gem opal have long been admired. With the attractive and characteristic "play of color," it is unique among gemstones and better specimens will show flashes of color of pure hues from all portions of the spectrum.

In the late 1960's, with the availability of electron microscopes to research mineralogists, almost simultaneous inquiries in Germany and Australia revealed the distinctive

nature of gem opal. At magnifications of approximately 15,000 times, appropriately prepared specimens revealed gem opal to be characterized by regularly stacked arrays of uniform-sized, sphere-shaped particles of colloidal silica. When the size of the spheres lies between certain specific limits, these regular arrays, or more particularly, the combination of spheres and their interstitial voids, provide for a three-dimensional structure which serves as a diffraction grating, if the colloidal silica spheres are transparent to light. Depending on the angle of incidence and the distance between parallel layers in the array, white light falling on the opal will be diffracted, such that for any one position of observation patches of pure spectral colors will reach the eye *(Figure 1)*. The colors can pass progressively through the entire range of the spectrum as either the source of light, the specimen or the observer change their relative position and the requirements for diffraction are satisfied for light of a different wavelength.

Depending on the domain within the opal over which a regular array of the spheres prevails, as also on the mosaic-like arrangement among these arrays, it is possible for the play of color to have a quite varied appearance. These variations are distinguished by descriptive terminology and range from the so called "pin fire" to the checkerboard appearance characteristic of "harlequin," to the broad flashes of "flash fire," and all conceivable combinations in between.

Gem opals from numerous localities have been examined in this study and with minor variations, all show the validity of these observations.

Synthetic Opal and Opal Simulants

The original studies which led to this understanding were well documented and soon led to numerous attempts to reproduce the structure of opal and the development of a synthetic opal gemstone. (See Darragh, P.J., Gaskin, R.J. and Sanders, J.V.) In the early 1970's, the rather remarkable milky and black synthetic opals produced by Pierre Gilson appeared and received acceptance. In 1976, another man-made material became available. Called Slocum Stone, it emulates the appearance of opal, although not exactly duplicating the effect of "play of color" in gem opal. (See Darragh, P.J. and Sanders, J.V.; and also Dunn, P.J.) Scanning electron microscopy reveals that Slocum Stone, an artificial glass with an irregular granularity, contains thin film or plate-like areas randomly distributed within the glass. These provide for a light diffraction effect which produces the distinctive Slocum Stone phenomenon.

Most recently, an opal simulant manufactured entirely of plastic has been developed. Samples of material from Australia and Japan have been examined. Infrared spectroscopy identifies the Australian material to consist solely of a plastic, the co-polymer of styrene and methyl methacrylate. Preliminary examination under the scanning electron microscope shows that the plastic duplicates the geometrical arrangement of three-dimensionally stacked arrays of spherical particles comparable in size to those present in

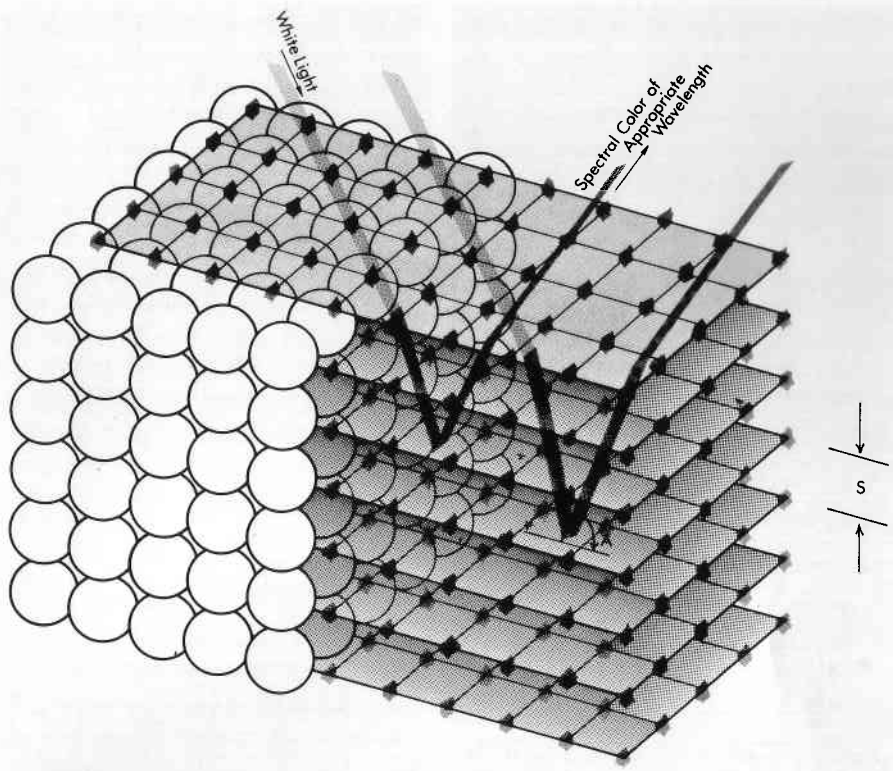


Figure 1. Patches of color are produced in gem opal when white light is diffracted by the ordered structure of silica spheres and interstitial voids. The particular spectral color observed is related to the distance S between adjacent arrays of spheres in the structure and varies with A, the angle of incidence and reflection.

natural gem opal. This material has a light milky appearance and is similar to lower quality Brazilian and Australian gem opal, with a play of color resembling pin fire. A sample examined had a refractive index of 1.465. The composition of plastic in the simulant from Japan has not yet been identified. In the single sample of this material seen to date, it has a very pleasing appearance duplicating the "play of color" in fine gem opal. A refractive index of 1.48 was measured. The specific gravity of this sample was determined to be 1.17. It is interesting to note that the sample was mounted in an 18-karat gold setting.

Numerous assembled materials with some of the characteristics of play of color in gem opal have been produced. These include the well known doublets and triplets in which a thin layer of natural gem opal is covered or sandwiched between other suitable natural or synthetic materials. Another approach has been to embed fragmented opal pieces within a plastic binding agent. This can provide for a

resemblance to opal, but the material is readily distinguished by close examination.

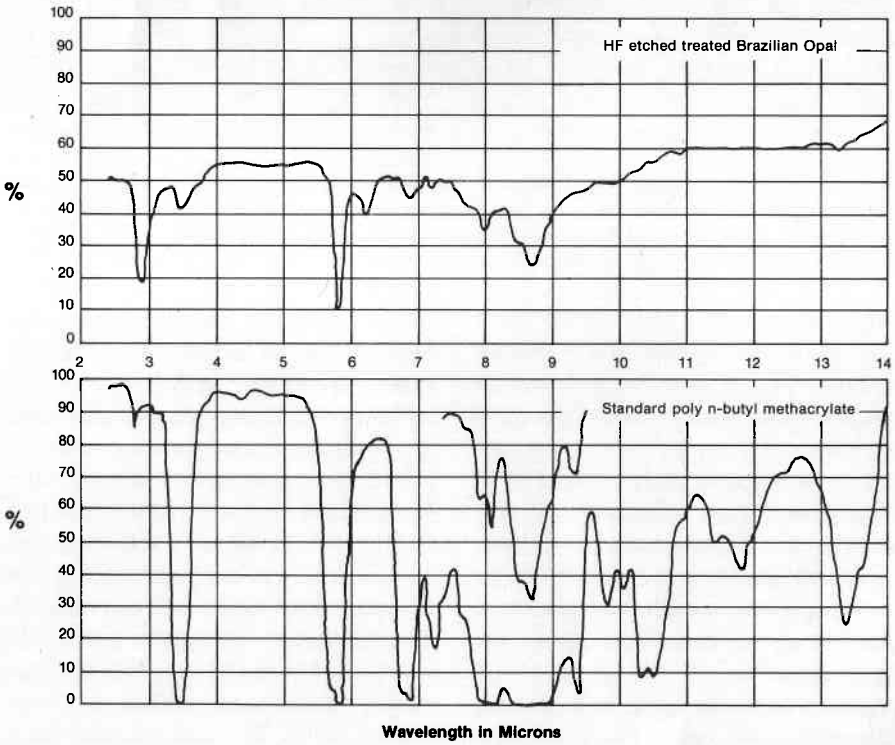
Another material which to the untrained eye may be confused with gem opal, is the assembled stone called Calcentine. The iridescent nacre layer of fossil ammonites and baculites from deposits of Permian Age is cemented to a suitable matrix and most often also capped by a quartz crystal cabochon. This provides for an attractive stone showing the effects of diffraction of light, but is quite distinct in appearance from the play of color in opal.

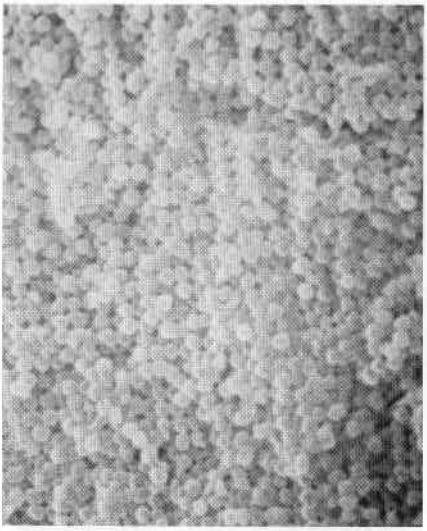
Plastic Impregnated Gem Opal

The first samples of this material seen had an appearance suggestive of poorer quality black opal from Australia. A slightly dull or smoky blue appearance in the body of the stone together with wisp-like veils of a deep blue-black color associated with some of the natural fractures in the stone were noted. This unusual appearance together with values for refractive index of 1.45 and specific gravity of 1.85, raised our suspicions with regard to the natural origin of this sample. Examination under the scanning electron microscope was most informative.

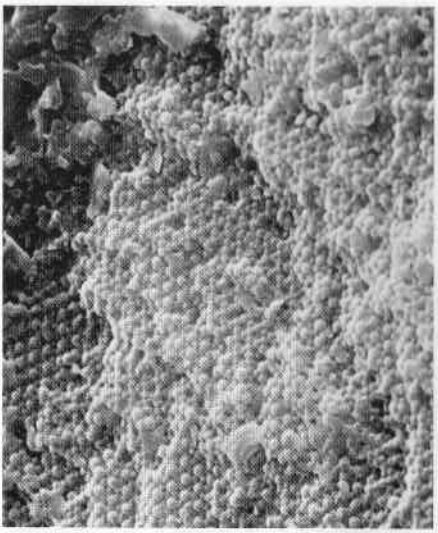
Figure 2.

INFRARED TRANSMITTANCE SPECTRA





Scanning electron microscope view of etched surface natural Australian opal magnified 14,000xs



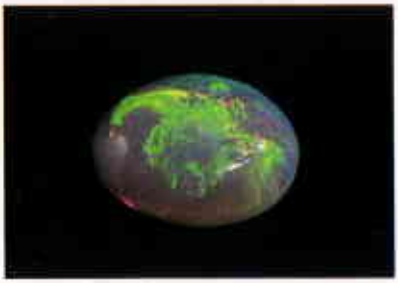
Fracture surface of plastic treated Brazilian opal magnified 9,000xs

A natural fracture surface exposed when the stone was broken revealed under high magnification the typical stacked arrays of silica spheres. These spheres, however, appeared to be embedded in a matrix of material filling the interstitial voids. This surface was etched with a 10% solution of hydrofluoric acid in water, for approximately forty seconds. On reexamination under the scanning electron microscope, the silica spheres had been dissolved but the interstitial matrix was untouched leaving a distinctive three-dimensional mesh work which was, in fact, a negative form of the normal silica spheres in gem opal. A small cabochon of this material was placed in hydrofluoric acid for an extended period. All the silica spheres were dissolved in this way, leaving a cabochon consisting only of the matrix material which had been used to impregnate the voids in the original opal. The composition of this strange cabochon, which still showed a polished surface and a diminished but distinctive play of color, was determined by infrared spectroscopy to consist solely of the plastic polymer n-butyl methacrylate *(Figure 2)*.

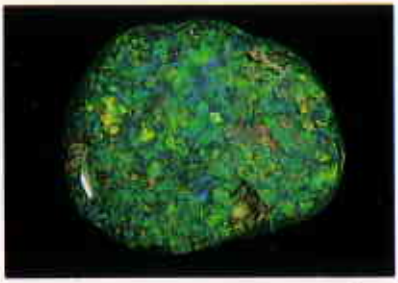
Numerous samples of similar plastic-impregnated gem opal have now been encountered. They include some very fine samples that resemble the best quality "crystal" opal from Australia and pieces with an appearance ranging from poor to excellent quality black opal, apparently as a result of a dye incorporated with the resin during impregnation. It is possible, however, that some natural opals

Natural Australian opal, pinfire type play of color.

Natural Australian opal, harlequin type play of color.



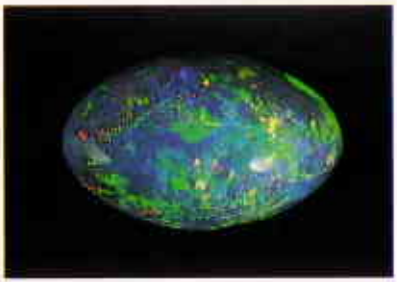
Natural Australian opal, broad flash type play of color.



Natural Australian black opal, mosaic type play of color.

Natural Brazilian opal, banded milky appearance.

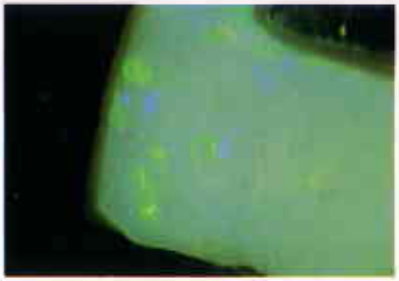
Plastic treated Brazilian opal resembling Australian crystal.



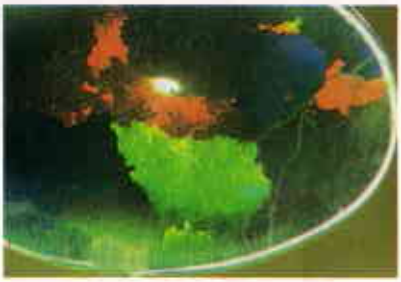
Natural Australian black opal, crystal type.

Plastic treated and dyed Brazilian opal showing hydrofluoric acid etch mark.

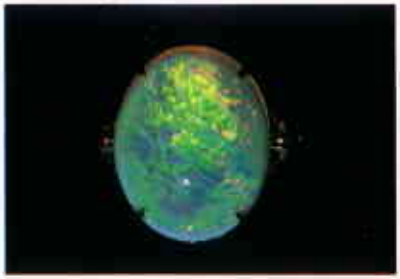
Plastic treated and dyed Brazilian opal showing detail of wisp-like veil of dye along crack and removal of dye in etched area.



Portion of cabochon showing play of color in plastic "negative opal."



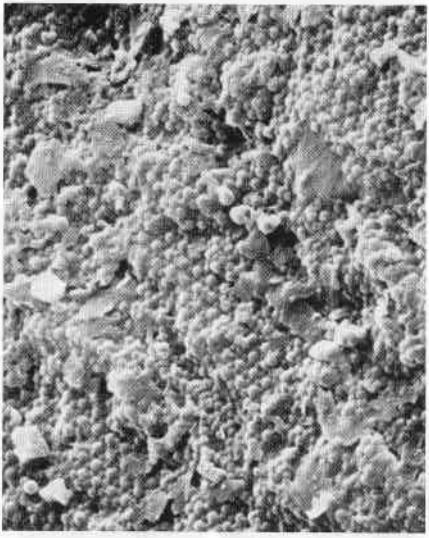
Gilson synthetic black opal.



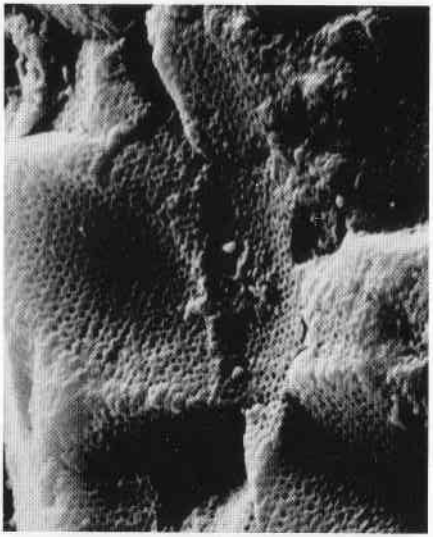
Japanese plastic cabochon simulating opal.

Plastic embedded opal fragments.

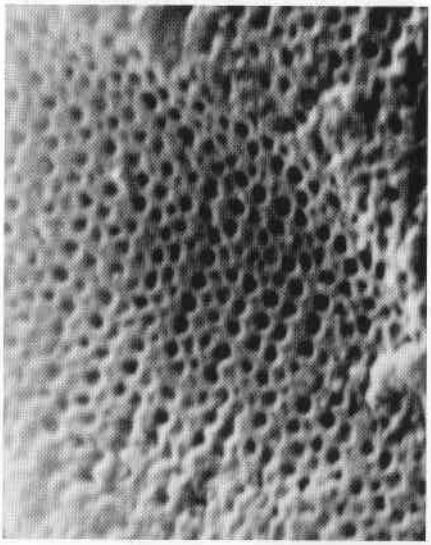
'Slocum Stone' opal simulant.



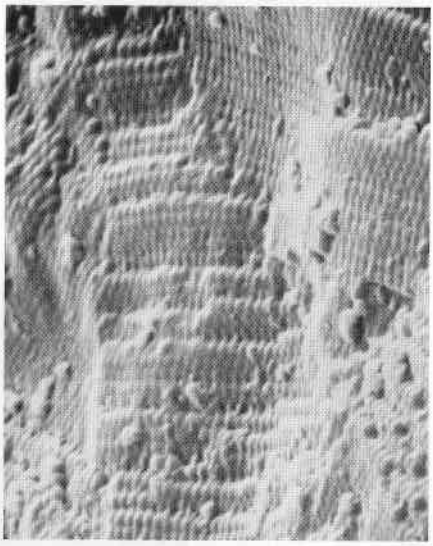
Plastic embedded silica spheres on fracture surface of plastic treated Brazilian opal magnified 9,000xs



Etched fracture surface of plastic treated Brazilian opal magnified 6,500xs



Etched fracture surface of plastic treated Brazilian opal magnified 16,000xs



Fractured surface of Australian plastic opal simulant magnified 15,000xs

with a color due to naturally included dark particles have also been impregnated.

The refractive index of this impregnated material appears to be consistently in the range of 1.410–1.460, while the specific gravity falls between 1.85 and 2.01. Recently, it has been reported (personal communication Dag Johnson) that a few samples of Mexican and Idaho opal have also been successfully treated.

The wide variety of sources, the variation in quality and also the variation in the value for specific gravity suggests that more than one source exists for this material. Further, it is considered that a variety of polymer plastics may be used for impregnation with or without a dye used to impart a body color suggestive of black opal.

At the present time, the only positive identification of this material is dependent upon the discovery of the mesh work structure in the plastic as revealed under high magnification by the scanning electron microscope following etching with a small drop of diluted hydrofluoric acid. It is hoped that a simple spectroscopic examination in the infrared will be perfected in the near future whereby a characteristic signature may be used for rapid distinction of this treatment procedure in gem opal.

It is important that recognition of the treatment of this material be readily available. While the treatment process appears to provide an interesting and useful source of a stable and quality gem product, there is a need for its distinction from natural untreated and presumably more desirable gem opal.

Acknowledgements

I would like to express my sincere appreciation to a number of people who participated in or contributed to this study. Firstly, Chuck Fryer, Director of the Gem Trade Laboratory in Santa Monica, whose observations, discussion and assistance were invaluable. To Dag Johnson and Mike Schowalter of San Diego County and Charles Howell of La Jolla, California, who provided several of the samples used in this study. To my assistant in the reasearch laboratory, Nancy L. Colonica, who took great care in the preparation of the samples for the scanning electron microscope and collected and prepared data. To Dr. Patrick Gillis, Santa Monica, California, for his assistance with the infrared spectrophotometry essential for identification of the specific plastic polymers used in impregnation. To Michael R. Havstad and Michael D. Waitzman for some of the color photographs illustrating this article.

References

Darragh, P.J., and Sanders, J.V.; Slocum Stone, *The Australian Gemmologist,* February 1975

Darragh, P.J., Gaskin, R.J. and Sanders, J.V.; Opals, *Scientific American,* April 1976

Dunn, P.J.; Observations on Slocum Stone, *Gems and Gemology,* Vol. XV, #8, 1977

Collins, H.F.; Canada Produces New Gem . . . Calcentine, *American Horologist and Jeweler,* July 1978

Synthetic Cubic Stabilized Zirconia

A New Effective Diamond Substitute

By RICHARD T. LIDDICOAT, JR. and JOHN I. KOIVULA
with photographs by Michael D. Waitzman and Michael R. Havstad

A Brief Description

Synthetic cubic stabilized zirconia, a newcomer in gemology, can now be added to the growing list of diamond substitutes. It is perhaps the most satisfactory of the one-piece diamond substitutes to date. As the name implies, cubic zirconia crystallizes in the cubic (isometric) crystal system. The chemical formula is ZrO_2 with minor amounts of certain metallic oxides like calcium oxide (CaO) or yttrium oxide (Y_2O_3) that act as structure stabilizing agents in the otherwise naturally monoclinic material.

The refractive index of cubic zirconia varies between 2.15 and 2.18 which is somewhat less than diamond's fairly constant 2.42 reading. The slightly lower refractive index is, in general, balanced out by a dispersion of approximately 0.060 which is greater than diamond's dispersion of 0.044. Showing no cleavage and with a hardness of 7-1/2 to 8-1/2 on the Mohs scale, cubic zirconia is a very acceptable synthetic gem material.

The much higher specific gravity of cubic zirconia, 5.60 to 5.95, compared to diamond's 3.52, makes this property a good test for gemological separation if the stone is unmounted. Under magnification, due to cubic zirconia's much lower hardness, rounded facet junctions and polishing lines will often be noted. In addition, cubic zirconia may contain small negative crystals arranged in sub-parallel rows that appear as tiny bubbles of very high relief. The negative crystals may in turn be lined or partially lined with a white powder that is probably undigested ZrO_2. On rare occasions negative crystals may be somewhat larger and more easily resolved.

As well as the colorless form, cubic zirconia is available in a wide range of colors from red to violet. Although somewhat brittle, it is easily faceted and should gain in popularity as a synthetic gem material.

Identification of Cubic Zirconia

The major obstacle to overcome in the identification of cubic zirconia or any diamond substitute is the blinding of gemological knowledge that occurs when someone is offered, at a low price, what appears to be a diamond. If a gemologist keeps in mind the many ways in which diamond substitutes may be detected, the chance of making a mistake is minimal. There are many ways to identify cubic zirconia. The most important tests are based on refractive indices, specific gravity, fluorescence and visual characteristics that become apparent both to the unaided eye and under magnification.

If loose, the much higher specific gravity of cubic zirconia is readily

Growth striations in cubic zirconia. Magnification 10x.

Stringers of negative crystal "gas bubbles." Magnification 25x.

Elongated bubbles partially lined with flux. Magnification 15x.

Large gas bubbles like these are rare in cubic zirconia. Magnification 45x.

Several colors of skull melt rough cubic zirconia.

Several colors of faceted cubic zirconia.

apparent. With those familiar with diamond sizes and weights, merely weighing the stone will show its weight to be considerably greater than that of a diamond of the same size. This is sufficient to prove that it is not a diamond. The factors related to refractivity show up in the appearance of the stone, particularly when tilted, and looked at from the side. When one views a round brilliant diamond from just above the plane of girdle, the opposite side of the stone still looks brilliant whereas there is a dark "V" at the center of the opposite side of a cubic zirconia, GGG or YAG. If a stone is laid on its pavilion main facets, and light is directed onto the stone through the table, then the size of the area of bright light coming

through the stone will vary depending on the refractive index of the material. There is a distinctly different appearance and larger circle of light transmission on a cubic zirconia as compared to a diamond. Of course, GGG and YAG have even larger circles. The same situation is true when one tries to read printing through a stone. Again, related to refractive index is the appearance of a stone when immersed in methylene iodide with a refractive index of 1.74. The loss of brilliancy in the cubic zirconia compared to diamond is marked to the eye.

Also, one could get an idea as to the identity of the unknown stone by using a reflectivity meter, such as a Gemeter, or Jeweler's Eye. While reflectivity meters have inherent faults and often give other than an accurate reading, there is a large enough difference between the reflectivity of cubic zirconia and that of diamond to make it easy to distinguish the substitute from diamond.

A carefully polished substitute that is as hard as cubic zirconia should have sharp facet edges, but those that are polished rapidly do show rounded facet edges, a feature never seen on a diamond. The softer substitutes such as strontium titanate and synthetic rutile routinely show the rounding of facet edges and are readily identified as substitutes by them. The girdle surface looks different from that of the bruted girdle on a diamond. There will be no cleavages on a cubic zirconia, which is an important identifying characteristic of diamond. Naturals, another key diamond characteristic, have also been observed on the girdles of cubic zirconias. These can be very confusing, as the photograph below illustrates. The inclusions in cubic zirconia, if present, are also clues to its identification; however, many stones must be studied to become familiar with the common appearance of these.

The reaction of cubic zirconia to ultraviolet radiation varies somewhat from stone to stone. Under long wave, a medium yellow to orange fluorescence is usually encountered. The color is roughly the same, or a little more yellow under short wave, and stones have been noted that while fluorescent to short wave are completely inert to long wave radiation. Unfortunately, some cubic zirconia shows no fluorescence. Another means of recognizing cubic zirconia that is useful to those who have examined a number of stones, is to place the stone table down on a piece of paper with a light overhead. In this way, the cubic zirconia shows much more dispersion than does a diamond of comparable size.

There are several new tests in the process of development that will be useful for identification of diamond versus its substitutes. One is a heat conduction test that should be on the market very shortly. Another is a new liquid developed by the GIA that will write smoothly on a diamond's surface but will bead up on diamond substitutes like cubic zirconia, GGG and YAG. (Gadolinium Gallium Garnet and Yttrium Aluminum Garnet).

Natural on cubic zirconia, Magnification 63.

Historical Note

"GEMOLOGY" the Bulletin of the Gemological Institute of America, Volume one Number one is reprinted here in its entirety in memory of Robert M. Shipley and the beginnings of his organized Gemological movement. The year was 1931.

GEMOLOGY

BULLETIN OF THE GEMOLOGICAL INSTITUTE OF AMERICA

Volume One | Los Angeles, California | Number One

A Gemological Society Is Organized

An enthusiastic group consisting almost entirely of jewelers and diamond dealers met at the Los Angeles Public Liibrary on the night of January 15 and organized a Gemological Society. This Society is the outgrowth of the interest shown by the classes in Gemology which have been conducted by Robert M. Shipley, Gemological Diplomate, at the University of Southern California.

The Gemological Society has as its purpose the advancement of the scientific and practical study of Gemology by jewelers and others who are interested and the furtherance of a greater appreciation of Diamonds and Gems on the part of the American people.

Meetings will be held bi-monthly for

the discussion and advancement of Gemology. Requirements for membership to this Society are based upon an examination, conducted by the Examining Board of the Society, on the elements of Gemology. As the Society progresses examinations will be held in various cities throughout the United States. A thing that will immediately affect the jeweler of foresight and integrity is the privilege of displaying in his store and window the emblem of the Society. The establishment of a strong membership committee makes membership possible only to persons of recognized integrity.

Temporary officers elected to hold office for two months were: President, Arthur H. Dibbern, Glendale; Vice-President, C. S. Fisher, Riverside; Secretary, G. H. Marcher, Los Angeles; Treasurer, H. E. Rapp, Pasadena.

The ideas and purposes of the Society are serious, being purely scientific in character and not a Trade Association or Club. Others than jewelers were among this organizing group and when the meetings are thrown open to the public many mineralogists, scientists and others are expected to be in attendance.

Jewelers Fortunate To Have Knowledge of Gemology

BY ARTHUR H. DIBBERN

Retail Jeweler, Glendale, and President Gemological Society

Those certain individuals interested in the study of Gemology who have taken the course at the University of Southern California under Professor Robert M. Shipley, G.D., were fortunate, indeed, in being given the opportunity to view with broader vision and greater knowledge that which to many of us constitutes our life work.

From this broader knowledge, with its disillusionment and more reliable scientific information, comes a desire for the opportunity of periodical contacts with an educational medium which will keep fresh in our minds the knowledge gained.

That opportunity is now to be given us thru the medium of the Gemological Society recently formed at the enthusiastic meeting held in the History Seminar room of the Los Angeles Library on Thursday evening, January 15, 1931.

It is to be reasonably expected that with a feeling of confidence formed on the part of the public by authentic knowledge thus gained we may be able to move forward, enjoying the privileges that result from a feeling of security among those whom we contact and serve.

Do You Know?

BY EVELYN DIBBLE

Charter Member Gemological Society

1. That when you tell your customer a synthetic Ruby is made up of small particles of real Rubies you are not telling the truth?
2. The ruling of the Federal Trade Commission on what constitutes a perfect Diamond and what those imperfections look like when you see them?
3. That the majority of "Topaz," in the showcases in America, are Quartz?
4. Which stones are dyed and which ones fade easily in stock?
5. That there is no more effective means of advertising than to have your customers say "he is a student, he knows his Diamonds and Gems?"
6. That the Federal Trade Commission has ruled against selling an "imitation" as a "synthetic?"
7. What constitutes this difference between an "imitation" and a "synthetic?"
8. That the Ruby is the most expensive of all stones?
9. That most jewelers believe a Diamond is only one-tenth harder than Sapphire?

Examinations for Membership in Gemological Society

Members of the fall classes who were unable to take their examinations may do so in February or March by application by letter or the phone to George Marcher, Secretary Gemological Society, 640 South Flower Street, Los Angeles, Tucker 1938.

The San Bernardino-Riverside Correspondence Course, group of 14, are meeting for review and discussions during February. Professor Shipley will conduct a final review class in March and an examination will occur about March 15.

Engaged in special research work in Diamonds and Gems at the laboratory of the Gemological Institute are G. G. Reisch, Los Angeles; C. W. Clark, Van Nuys; Richard Ewert, Santa Ana; Marvin Thomas, Pasadena; Roy Martindale, Glendale; Maren Hansen, Los Angeles; Geo. Schneider, Hollywood; Geo. Marcher, Los Angeles; Edward Mitchell, Alhambra; F. H. Smith, Ontario; Leslie Gray, Culver City; John R. Johnson, Pasadena; Geo. F. Hambright, Los Angeles.

Members of fall classes wishing to answer questions already distributed in preparation for examination may have these answers corrected and corrections explained for a fee of $2.00.

GEMOLOGY

Bulletin of the Gemological Institute of America

The purpose of this Institute is the dissemination of scientific knowledge of diamonds and gem-stones to the jeweler and the general public.

Robert M. Shipley, G. D., President,
811 Title-Guarantee Bldg.,
Los Angeles, California

The rules approved by the Federal Trade Commission regarding the naming of synthetic stones and the definition of a perfect diamond have made every thinking jeweler realize the importance of a correct scientific knowledge of diamonds and gems. This Commission has just taken action against a Chicago concern guilty of violating their ruling regarding the use of names applied to imitation stones. The ignorance of the jewelry trade in such knowledge is appalling and should almost be classed as criminal neglect. Frequently the newspapers carry stories of damage suits brought by customers which only the ignorance of the merchant made possible.

Face the Facts

How can the honest merchant combat the unscrupulous advertisers of "perfect-cut," "blue-white" and similar diamonds unless he himself thoroughly understands and can explain to his community, in their own language, the *facts*. Increased sales are attracted to the man who is known as "a student of his business" as surely as steel is attracted to the magnet.

When I was a jeweler I read books on gems and bragged about my knowledge of diamonds and precious stones, but the loss of an important customer who had "checked" my statements impressed me with the necessity for *correct* knowledge. The only organized study of Gemology was in England and no adhoritative jewelers' reference book was then published. I determined to obtain this instruction, and, if possible, the resulting degree. This I accomplished at the first opportunity, obtaining my degree of Gemological Diplomate in England.

Reasons for This Bulletin

Since that time I have devoted five months to "boiling down" the combined opinions of the American, English and German authorities into my Correspondence Course and my Reference book, which I have arranged as an authoritative book for quick reference and sales help, to give information quickly and correctly to the one who seeks it.

In passing on to the trade the results of my years of research work and sales experience I hope to be of service to the diamond and gem-expert, jeweler or salesman who honestly wishes to tell the truth to his customer and to gain or retain the respect in his community as a merchant of unquestioned integrity.

The Gemological Institute

The Gemological Institute is an educational institute organized for the purpose of education and research in the subject of Gemology. The Institute desires to assist the merchant increase his profits by acquainting himself with a knowledge of factors which affect the value of Diamonds and Gems. It has an honest intention to eliminate the ignorant and, the very occasional intentional misrepresentations, more or less prevalent in the trade, and anticipates the support of dealers and merchants who are interested in such elimination.

It hopes, in its modest way, to assist in this education of the jeweler which has been fostered by the Jewelers' Circular, Keystone and other trade journals, as well as by Professors Frank Wade, and Paul Kerr.

The Institute depends for its maintenance upon the sale of the Correspondence Courses and the materials which have been compiled by Professor Shipley for the Diamond and Gem merchants and other students of Gemology. Such materials consist of reference books, text books, photographs gathered from all parts of the world, colored plates of Gems; also, books on Diamonds and Gems; instruments, diamond lenses, etc. An extensive laboratory is maintained and the advice of an expert is obtainable for correct identification of Diamonds and Gems.

Some far-seeing jewelers, have already become sustaining members (names to be announced in our next issue) because of their interest in the educational and scientific nature of the work. These retail jewelers believe that the public are losing confidence in the trade because of misinformation given by many of its members and have signifed their intention of financially assisting the Institute in its work which is also the fostering of a movement for the dissemination of correct educational information looking toward the elimination of unintentional misrepresentation by the conscientious merchant.

The temporary quarters of the Gemological Institute of America are at 811 Title Guarantee Building, Los Angeles.

Interest Shown in Gemology Gratifying

BY GEO. H. MARCHER
Lapidist, Los Angeles; Secretary Gemological Society

The sincere interest shown in the present movement toward a better knowlege of gem-stones is both a surprise and a pleasure. Jewelers formerly have shown but little desire to familiarize themselves with jewels in a comprehensive way although the jewelry business is named from them.

While selling stones on the road it was apparent that customers should know more about gems to handle them successfully. Books on precious stones were sold the customers whenever possible.

I firmly believe the Gemological Society will promote and maintain a wider knowledge among jewelers and laymen of these most permanently beautiful objects of nature.

GEMOLOGY VITAL TO TRADE

BY L. I. MERITHEW
Retail Jeweler, Long Beach

The movement launched recently in Los Angeles, which should create a nation-wide interest in the study of Gemology by the jewelry trade is one of vital importance to the legitimate jeweler. Such a study will have a great tendency to *re-establish*, confidence in our profession in the minds of the general public.

GEMOLOGICAL SOCIETY VALUABLE TO THE INDUSTRY

BY C. L. RUNYAN
Retail Jeweler, Huntington Park
Chairman of the President's Council, Southern California Jewelers Association

I do not believe that the jewelry business can be over-organized and I believe that the Gemological Society has a valuable place in the industry. Judging from the benefit obtained from the Gemological course by a member of my organization the study of the subject will prove valuable to every merchant and the Society should grow rapidly. Personally, I am hoping to qualify before the next meeting.

GEMOLOGICAL NEWS

Members of the laboratory class at U. S. C. welcome two new members Jean P. Spitzel, diamond importer, and Lyle Merithew, Long Beach jeweler.

J. E. Peck, engineer and prospector of Jacumba, California, is enthusiastically preparing for his examination for membership in the Gemological Society .

(Cont'd on Page 3)

UNSOLICITED LETTERS FROM CORRESPONDENCE COURSE STUDENTS

"Enclosing answers to questions. I am enjoying your course very much and find it very worth while." F. G. Palumbo, jeweler and watchmaker, Fresno, Calif.

* * *

"Mr. Horning and myself like the course as far as we have gone and expect it to be of great value to us in the future. Harold Hoffman, South Washington, Virginia.

GEMOLOGICAL NEWS

(Cont'd from Page 2)

Geo. F. Hambright's talks to jewelers on Diamonds and Gertrude McMullen's talks on colored stones have done much to interest Southern California jewelers in the further study of these two branches of *Gemology*.

CLASSES IN GEMOLOGY

LONG BEACH-HUNTINGTON PARK ASSOCIATION—Limited to twenty. Lectures Friday nights at 7:15. Begin February 6.

SAN DIEGO ASSOCIATION—Every one invited to first two lectures. To be held Mining department, Chamber of Commerce. Begins Monday night, February 2 at 7:15. Sponsored by San Diego Jewelers Association.

LOS ANGELES LABORATORY CLASS—University of Southern California class to be held at 811 Title Guarantee Bldg. Tuesday nights at 7:15.

LOS ANGELES PREPARATORY CLASS FOR GEMOLOGICAL SOCIETY — Special instruction for those wishing to become members of the Society. Classes limited to 15 persons. Beginning Thursday night February 5, at 7:15. 811 Title Guarantee Bldg., Los Angeles.

LOS ANGELES SPECIAL LECTURES FOR DIAMOND DEALERS AND SALESMEN—From 5 to 6:30 p.m. Thursdays. Beginning February 5, 811 Title Guarantee Bldg., Los Angeles.

SHORT COURSE in general laboratory work and advance study of the diamond. Starting February 12 at 7:15 811 Title Guarantee Bldg.

Call VAndike 6914 for information, or attend the next meeting of a Los Angeles class at 811 Title Guarantee Bldg.

The members who have already qualified may place orders for Gemological Society signs by communicating with the Secretary, Geo. H. Marcher.

First Members Gemological Society

All members of the local and correspondence classes were made charter members of the Gemological Society pro-tem. Those who have "passed" their first examination in Gemology, are Arthur H .Dibbern, Glendale; H. E. Rapp, Pasadena; G .H. Marcher, Los Angeles; C. S. Fisher, Riverside; M. F. Thomas, Pasadena; James A. Newton, Long Beach; John R. Johnson, Pasadena; Geo. H. Schneider, Los Angeles; G. G. Reisch, Los Angeles; Floy Runyon, Huntington Park; Leo Kirchoff, Long Beach; Evelyn Dibble, Pasadena; E. E. Martindale, Los Angeles; Neal Tanquary, Los Angeles; Gertrude McMullen, Los Angeles.

Owing to the Christmas "rush," illness, etc., others of the class who had no opportunity to take examinations were elected pro-tem until the meeting of March 31, they are: Charles W. Clark, Van Nuys; Thomas D. Arnold, Pasadena; Glenn Box, Monrovia; Claude Davis, Pasadena; Fred Morgan, Pasadena; Roger Kelley, Pasadena; Emil R. Zielke, Pasadena; W. R. Cartiser, Pasadena; Walter Hall, Pasadena; Chas. E. Everard, Pasadena; Earle B. Hall, Pasadena; Geo. W. Collis, Pasadena; Paul Hannaford, Pasadena; Calvin Arnold, Pasadena; Henry James Armstrong; Chas. G. Lewis, Pasadena; H. Wellman, Alhambra; Bert Jenney, Pasadena; Martin R. Thomas, Pasadena; Earl Smillie, Pasadena; Florence Smith, Ontario; F. H. Smith, Ontario; Leslie Gray, Culver City; DeMoss McCamant, Los Angeles; E. E. Aughe Los Angeles; Richard Ewert, Santa Ana; Conrad H. Mumper, Los Angeles; S. Shapiro, Los Angeles; David A. Kirk, Los Angeles; Louis M. Jabner, Los Angeles; Samuel Sideman, Los Angeles; Kirk Goldsmith, Riverside; Duward Howes, Los Angeles; Erwin King, Los Angeles; T. R. Canady, Huntington Beach; Mrs. Marjorie Canady, Huntington Beach; Kenneth Low, Los Angeles; Joseph R. Milnor, Los Angeles; Emil Shostrom, Los Angeles; Jean Wood, Wilmington; Edward Morrison, San Pedro; M. Hull, Los Angeles; Sydney Irmas, Los Angeles; Carl Gross, Los Angeles; Maren Hansen South Pasadena; George Munn, Los Angeles; A. C. Heinzel, San Bernardino; Guy Lauderbaugh, San Bernardino; Bob Wellman, San Bernardino; H. C .Schultz, Riverside; Mrs. H. C. Schultz, Riverside; Howard Black, Riverside; Kirk Goldsmith, Riverside; F. W. Twogood, Riverside; J. E. Peck ,Jacumba; L. R. Wagner, Sacramento.

QUESTIONS AND ANSWERS

Conducted by Robert M. Shipley, G. D.

Address questions c-o Gemological Institute of America

1. What is the Premier "quality" diamond? Ans. Premier is the name applied to any name applied to any stone which appears bluish under a strong reflected light, and yellowish or brownish when one looks through it.

2. What are 'blemishes" which Federal Trade Commission state a perfect stone should not "disclose?" Ans. Shipley's Gemology states: "Blemishes are surface imperfections and include surface cracks, cavities, nicks, knots, scratches and facets cut exactly with the "grain." (Write for complete copy of the definitions which follow in text if further definition is desired.)

3. Why does Zircon "pit" or chip easily? Ans. The cleavage is poor but it fractures easily when it has been treated. The statement that it cleaves easily is incorrect.

4. What is "Wedgewood?" Ans. Wedgewood is *not* an imitation of a gem-stone. It is a very famous chinaware made in England. Such cameos have been made not as imitations but as objects of art by the Wedgewood company for over a century.

5. A recently purchased fine Amethyst faded in my window, and dealer refuses to replace it, stating that genuine Amethysts often fade in the sun. Is he right? Ans. Yes, many colored stones fade in the sun.

6. What is "Olivine?" Ans. The "Olivine" of the jeweler is a green Garnet, properly called Demantoid. It is not olive colored but a much brighter green. Olivine is the mineralogical name of the Peridot.