



NMC NUGGET

Winter 2017
Volume 2,
Number 1

A MESSAGE FROM OUR PRESIDENT

During the past twelve months, we've had a renaissance at the club. Sixteen new members are contributing fresh ideas and energizing our workshops. It's a pleasure to experience such creativity and harmonious cooperation bridging our interests.

I wish everyone a healthy and happy new year!

Dennis Kirchner

WORKSHOPS ARE AMONG THE MOST POPULAR OUTREACH ACTIVITIES OF NASSU MINERAL CLUB

Joe Austin – Wire-working Workshop

Always very generous with his time, NMC member Joe Austin is a prime example of the NMC motto, "Each one teach one". He has led countless workshops over many years in different areas of lapidary. One of his most recent sessions this fall was on the practice of wire wrapping. We watched and learned the steps he modeled to create a classical wire pendant frame, which incorporates both square and half-round gauged wire. The cabochons we used were approximately 3cm x 4 cm ovals but with a little perseverance the same principles Joe taught can be used to create frames around almost any shape of cabochon including those that are asymmetrical. The resulting border forms a more uniform appearance and a very secure seat around the stone's perimeter in contrast to stones wrapped free-form.



At the end of the work shop, one lucky participant won the beautiful finished sample Joe used to teach wire wrapping!



NMC OFFICERS 2016-2017

PRESIDENT
Dennis Kirchner

VICE PRESIDENT of LAPIDARY
Jim Sisti

VICE PRESIDENT of EVENTS
Elise Gad

SECRETARY
Barbara Kruger

TREASURER
Elaine Grayson

MEMBERSHIP CHAIRMAN
Ronnie Umans

WEBMISTRESS
Sue Goldman

EDITOR & NMC LIASON
June Miller

PHOTOGRAPHER
Rose Marie White

CONTENTS

Spotlight on:

Ronnie Umans - 2

Summary of Activities - 3

Our Newest Members - 3

Madelyn 'Mike' Todd –
Microminerals - 4

Sculptural Jewelry from
Polymer Clay - 5

The Big One that Didn't
Get Away – 6

Really, A Planet Made
of Diamond? - 7

SPOTLIGHT ON: RONNIE UMANS

As in all rock clubs, NMC abounds with extraordinary individuals leading ordinary lives. In this column, we'll feature some members who shed light on who we are and what we're about.

Rosamond Umans, known as Ronnie, has been a part of the club for over 25 years, although she first discovered it and became a lifelong advocate of its programs during the 1970s when she attended a mineral and gem show sponsored by the Nassau Mineral Club in New Hyde Park.

During her tenure, Ronnie's served on the NMC Board and has been its membership chair for many years. While many changes have occurred over the decades, the club's hospitality remains intact. She personally welcomes all new members, describes the club's philosophy, gives tours of the premises and makes introductions to others who share similar lapidary interests.

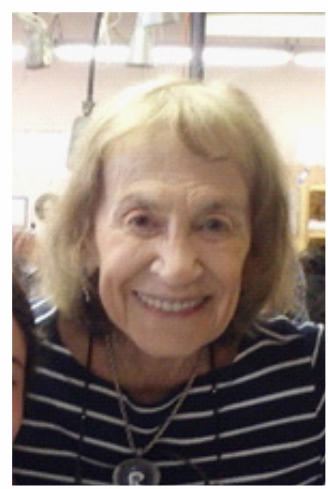
Ronnie is one of the first people to arrive at the club on Saturday mornings with her project of the day already fastidiously planned. She's usually hunched over a bench or at work behind a lap machine before most of us have unpacked our tool kits. Not by coincidence this habit has allowed her to complete a high percentage of the tasks she undertakes, filling some of us with a sense of envy and awe. At the same time, she generously shares her knowledge with members who seek her advice. She's often found in the middle of a group of people demonstrating important lap skills like polishing cabs, working with metals, making chainmaille, or polishing nuggets into faceted gems. Because of the high standards used to gauge her own work, she's taught us a very important lesson by her example. Interestingly, Ronnie's lifelong artistic quest has also taken her to work in disciplines as disparate as music (violin, piano), couture design, weaving, knitting, macramé and stained glass.

One of the high points of her years with NMC took place off premises at William Holland School of Lapidary Art in northern Georgia. She thinks the excursions to Georgia were an affordable way to hone skills through hands-on workshops and find kindred spirits from sister organizations. Based on her personal experiences there, she advises all members to try Holland or a venue like Wildacres in North Carolina. Both offer an interesting selection of workshops, a chance to interact with prominent instructors and the satisfaction of creating original pieces from design to completion

When asked the reasons for her close affiliation with Nassau Mineral Club, she commented, "It's a second home, a place to indulge the desire to be creative and construct pieces of jewelry that are unique and beautiful (to me)", adding, "Jewelry is a very personal thing. Someone else may not like it. I make what I make for me."

In keeping with her magnanimous nature, Ronnie donated funds to NMC in 2016 for a custom tool cabinet to store lapidary tools and supplies. She did not want acknowledgement for her thoughtful gesture. She stated, "I love the club. I'm just doing this to give back a little for all it's given me."

Thank you, Ronnie, for all you've done and continue to do for NMC.



OUR LOCATION AND WORK SESSIONS

The Nassau Mineral Club meets every Saturday from 10 a.m. to 2 p.m. in the lapidary section at Garvies Point Museum excluding holidays. The Museum is located at , 60 Barry Drive in Glen Cove and our workshop is downstairs.

Go to: www.nassaumineralclub.com for information.

A WARM WELCOME TO OUR NEWEST MEMBERS!

Robin Baskin
Tony Binona
Vaiva Boertje
Nicole Cooper
Paul Dong
Jordan Drucker

Cristine Martins
Tom Martins
Larie Mays
Bronnie Rauer
Neuza Schinmann
Anne Scotte

Amy Schwing
William Schwing
Shanna Stein
Rebecca Weitz

SUMMARY OF NMC ACTIVITIES (JULY-DEC, 2016)

Notes by Barbara Kruger, Secretary

Members either attended or participated in local Gem, Mineral and Jewelry Shows

LIMAGS Mineral, Fossil and Jewelry Show in Mattituck on July 30-31

Queens County Fair: Sept 24 and 25 exhibit by Leona and Joe with help from Jim and Rose Marie (Chip)

Freeport Mineral, Fossil and Jewelry Shows on August 28-27 and October 29-30

Long Island Craft Guild Fine Art Craft Fair in Garden City on Nov 19

Suffolk Gem & Mineral Club Mineral, and Jewelry Show in Patchogue Dec 3-4

Workshops for members and non-members held from July - Dec

- Joe Austin - Wire Wrapping Workshop: 1-on-1 with Instruction on Oct 8
- Madelyn Todd - Micro Minerals – Talk, and Look at specimens on Nov. 12

COME SEE OUR NEW TOOL CABINET

In late June-July, the club arranged for the construction of a new tools Cabinet. The funds for the Cabinet was donated by a member, Ronnie Umans. The Cabinet is for tools for Metalsmithing, Jewelry, Gem Mounting etc. Basic essential tools were purchased and arranged in the new cabinet. Additional tools and supplies e.g., for soldering etc. will be ordered as needed.

SUMMARY OF BUSINESS MEETINGS (JAN - APRIL 2016)

KILN USE:

The kiln is supported by the NMC. Members interested in enameling pay a one-time \$100 to the NMC. Members who are learning to enamel may only use the kiln initially with members who know how to enamel with the Kiln.

Repair and Maintenance of the Kiln: The NMC will pay to replace the burnt out elements in the Kiln. Enamels for enameling are the responsibility of those who use the kiln.

LAPIDARY AT NMC – we're creating a safer, cleaner environment. Safety procedures (and wearing appropriate garb – goggles, masks, and aprons) permanently mounted wall instructions for safety protocols.

Members to teach new members – EACH ONE TEACH ONE

- Instructions for Trim Saws or Cabochon Slab Saws are completed and posted.
- Directions for lapidary grinding machines to be laminated and posted
- Directions for polishing and faceting equipment are being developed.

Nassau Mineral Club has an updated and expanded website. Webmistress is managed by our member, Sue Goldman. Our website is: www.nassau-mineralclub.com and www.nassaumineralclub.org

- Monthly or Bi-Monthly Nugget Summary Update and Calendar of Events – sent by email and posted on the website
- Quarterly Newsletter: Nugget ... to be updated quarterly, posted and sent by email
- Members should contribute something (1x/year) to put into e-newsletter section of Nugget to be posted on the website: e.g. short descriptions of how to do something or how to work safely with a machine or a technique & send it to June Miller June Miller millerjune92@gmail.com

RECENT NMC ACTIVITIES

MADELYN (MIKE) TODD – MICROMINERALS WORKSHOP

On November 12, Madelyn Todd presented an overview on micro minerals at NMC. Her interest in the field flowered after joining Nassau Mineral Club's Micromineral Group shortly after she became a member in 1976. Through her presentation, we learned there are dedicated rock specialists who create vast collections of minerals with specimens small enough to fit on the point of a pin. The guidelines for collecting, mounting and inspecting microminerals employs the use of microscopic techniques. This enables collaborations between collectors and researchers who now routinely share data of their findings on the morphology of metamorphic, igneous and sedimentary matter.



The term “microminerals” has different meanings.

Rock hounds use the word to describe a sub-set of minerals made up of samples that are extremely small – from nano-scaled specimens to pieces that approach $\frac{3}{4}$ “cubic in overall volume. The advantages to limiting a collection to these parameters are practical as well as useful. For passionate collectors, acquiring rare specimens might be otherwise prohibitive. In addition, far less space is needed to display one’s possessions. Also, examining carefully mounted micro samples under a lit microscope reveals extraordinary detailed information about a specimen’s unique morphology - physical properties like color and intrinsic structure. Such identifying features might be missed when examining much larger chunks of the same material with the naked eye.

What does one need to become a micromineral collector? According to Madelyn, the initial investment in tools and equipment is small and quite reasonable. She recommends a set of narrow, fine - pointed tweezers, tooth brush, pin vise and hand held magnifier. Not essential but also helpful: a binocular headband, a jeweler’s loupe and access to a microscope with a magnification of 5X to 30X (ideal) or higher. Time, patience and steady hands also come in handy. Equipped with these tools, one may learn to examine, collect and mount a collection.

Traditionally, displayed specimens are mounted on pedestals “as thin as a cat’s whisker” in tiny box-shaped containers. The mineral’s name and place of origin must be clearly written on a wall of the container. While sources of microminerals are varied, enthusiastic collectors often add to their collections by sharing samples they have with one another.



The highlight of Madelyn’s presentation was observing microminerals under a stereo microscope. Each mount was catalogued by number with its name, chemical formula, physical properties and other interesting facts compiled as reference. Aha moments filled the air as we viewed beautiful crystal needle clusters rising from deep colored beds of blue, green and gold (Aurichalcite) and saw specimens like Rhodocrosite (MnCO_3) with its trigonal system under higher power.

It is universally agreed that collecting and viewing microminerals leads to appreciating rocks from a different vantage point. More information about minerals is available on: www.min.dat.org

EMERGING ARTISTIC DIRECTIONS AT NMC

SCULPTURAL JEWELRY FROM POLYMER CLAY

By Cristine Martins

If you've been to a session at Garvies Point recently, you may have noticed a small group working diligently with strange devices like scalpels, tissue blades, gold leaf, mica powders and even pasta machines. You might have wondered just what was going on there, and the quick answer is: sculpture and jewelry making.

The medium is polymer clay, and the possibilities are endless. This kind of clay comes in many colors, can be worked for months—even years—without hardening, polishes to a hard shine, can be manipulated with surface treatments, and can be made into museum-quality jewelry and miniatures in the hands of a skilled artist. Best of all, the curing process is done under comparatively low heat (265-275 degrees F), in a regular oven or even a toaster oven, so equipment cost doesn't have to be astronomical.

Polymer clay combines aspects of organic clay and glass-working techniques. The caning process, where different colors of glass are formed into a rod that contains some sort of design—usually a flower—when cut into pieces, is one of the basic skills of the polymer clay artist. The Venetian glass millefiori technique has been adapted to great success using colored clays, surrounded with a translucent clay to hold shape and add depth. Additionally, canes can be made that contain words or letters, faces, or other images, depending on the skill of the cane maker. Leaf canes are common, and more intricate canes can be made to form the wings of a butterfly, or even the feathers of a bird.



Similar to glass canes, these polymer canes start out relatively large and can be reduced to many different sizes, giving the artist options. Also like glass canes, they can be made in advance, then stored and used over a period of time, because polymer clay doesn't harden until baked. Slices of multiple canes can be combined to form a single piece of jewelry or sculpture.

Polymer clay also works like organic clay in many ways, but instead of a giant, costly, slab roller, the polymer artist uses a pasta machine to form flat sheets of varying thicknesses. The parallel rollers of a pasta machine can also help blend the clay into graduated multi-color sheets. Other traditional sculpting tools such as the ball stylus, wedge, and blades are used as well, but polymer clay blades are generally much sharper than the organic clay scraping tools because polymer clay is a bit more resistant to cutting.

Our small group at Garvies Point is using polymer clay to make unique settings for gems and minerals. Whether it's a small dragon sculpture surrounded by quartz crystals or a gemstone set in an ornamental clay bezel, polymer can be used in place of, or alongside, traditional materials. An added bonus with polymer clay is the color. All that color theory we learn in art classes can be used with polymer clays to complement natural stones. Textures also play a large role, and the options there are limitless because polymer clay—unlike organic clay—does not shrink when baked.



For some reason terms like “epoxy” and “resin” aren't met with the same skepticism as “polymer” in jewelry making, but polymer clay is like any other artistic medium—give it to a newcomer and you might end up with something that looks like a 5-year-old made it. However, if you put it in the hands of an artist with some skill and experience, you could end up with something very special, indeed.

If you come to a session at Garvies Point and we're clay-ing, feel free to come over and check out what we're doing. Since we started a month or two ago, we've made quite a bit of progress. Our latest effort has been a clay stack that emulates the metal-working patterns of mokume gane in colorful ways, and we intend to turn some of that into cabochons and pendants in the very near future.

This exciting article on the second largest diamond ever discovered is excerpted from the January 2017 edition of The Bulletin, published by New York Mineral Club. Mitch Portnoy, President of NYMC, graciously gave us permission to reprint the article. You can browse past and current copies of The Bulletin on the Nassau Mineral Club website.

TOPICS IN GEMOLOGY is a monthly column written by Diana Jarrett, GG, RMV, based on gemological questions posed to her over the years by beginners and experts alike. Contact her at diana@dianajarrett.com.

THE BIG ONE THAT DIDN'T GET AWAY

What a difference a day makes. Economic reports by the end of October 2015 lamented the demise of the diamond mining boom in Botswana. "The honeymoon is over in Botswana, where the diamond industry that led the world has fallen on hard times," cried Bloomberg reporter Mike Cohen in *The Nerve Africa*, a news platform covering Africa's economic climate. In the case of Botswana, 'diamonds aren't forever' was the gist of that gloomy report.

Botswana's Evolution: Over 50 years ago, Botswana miraculously morphed from dusty boondocks into Africa's snazziest urban society where wealth was evident at every turn; shopping, clinics, schools, office blocks, malls, and the whole shebang. Botswana's credit ranking was also tippy-top. Driven by the diamond trade, the region stayed in great shape until diamond prices started heading south and China put on the brakes. The ease of diamond yield in that region also impacted its output. Diamond harvests there occurred relatively near the surface. But digging deeper made the process more costly with ever dwindling returns. If Not Diamonds, What?

A shift in Botswana's diamond production by 2014 made Russia the world's top producer, risking the closure of some mines with job losses for the first time in its dazzling diamond-rich history. "They have had so much easy money for such a long time, claimed Charles Wyndham, a former sales director at De Beers. "They are perhaps a victim of having all their eggs in one basket." What a basket it was while it was full. To counteract the unfortunate downturn, Botswana looked outward for other viable avenues of economic diversity. Minerals like copper, coal, iron ore and nickel are also produced there. But pundits point to a governmental weakness in those alternate channels. While production of the natural assets was viable, they fell flat in the export department, according to government insiders.

And Then . . . and Then . . . Wait for It!

All that 'what will we do' chatter was still percolating in November. And then something happened. Something unimaginable turned up at Lucara Dia-

mond Corp., a small outfit operating in Karowe mine, Botswana. The 2nd largest diamond ever found had just been recovered. For the first time in over a century, a mine turned up a crystal over 1,000 carats. No one at this deposit had ever seen anything like it. Weighing in at 1,111 carats, the stone also proved to be a rare pure variety; a type IIa diamond. Less than 2% of all diamonds are classified as type IIa. The designation identifies crystals free from nitrogen impurities which are the culprits of that undesirable yellow tinge found in most stones. Type IIa are a collector's dream, and priced accordingly, on the north side of 60K per carat. On a Roll

The diamond world gasped at this new discovery with its hefty avocado size and magnificent clarity. The news released about the discovery shot Lucara's stock through the stratosphere. And that was fine with investors. Because the very next day, and you can't make this stuff up; the mine turned up another jumbo crystal. The mammoth Lucara Diamond's big reveal overshadowed their second news release of an 813 carat diamond which would be the world's 6th largest diamond, and then a 374 carat stone. When does an 800+ carat stone go unheralded, or its 374 carat sidekick for that matter? What's Next?

Small though the mine is, apparently it's centered on a mother-lode of a deposit. Since opening three years ago, the family-owned mine has produced 95 diamonds of 100 carats or more. Exciting as that is, does this change the entire diamond situation for the nation of Botswana? Hardly. But these energizing discoveries bring a welcome nuance to the conversation about what might lie ahead for Botswana. And what about that ginormous initial find? Is there a chorus of eager buyers lurking in the wings? Well, yes and no. Almost in real time to the news release of the 1,111 carat Lucara diamond discovery, offers from around the globe poured in. "The Hong Kong one came through this morning," claimed Lucara's CEO, William Lamb. "My boss wants to buy the diamond, no matter what the price" the caller alleged. But the company is in no rush to sell. "I think there's more value to be gained for Botswana if we actually can extend it and make it into more of a story." Looks like that has happened already.

REALLY, A PLANET MADE OF DIAMOND?

by June Miller

"A Planet Made of Diamond, Twice the Size of Earth" was a lead in World News, October 11, 2012. The feature described an unusual exoplanet (planet that orbits a star other than the sun) only 40 light years away from us with a vastly different composition from earth.

A research team at Yale University led by Nikku Madhusudhan studied 55 Cancri e, (since named Janssen), located in the constellation, Cancer the Crab. As the innermost planet of 8 in the system, 55 Cancri e takes 18 hours to complete an orbit and radiates temperatures over 1,700 degrees Celsius or 3,100 degrees Fahrenheit on its face toward the sun.

"The surface of this planet is likely covered in graphite and diamond rather than water and granite ... This is our first glimpse of a rocky world with a fundamentally different chemistry from Earth", stated a Yale release. Planets with a similar composition are grouped and sometimes described as 'carbon planets', a theoretical construct that differentiates planets by their higher levels of carbon compared to oxygen versus planets like earth with a higher level of oxygen compared to carbon. The university team's findings were accepted by Astrophysical Journal Letters for publication and the authors estimated up to a third of 55 Cancri e could be diamond.

About a year after the initial report was released, an international group of researchers found the host star, 55 Caci, contained less carbon than originally found, with a carbon-oxygen ratio of 0.78:1. The team examined data that gauged the amount of oxygen contained in the star that had not been previously studied. Johanna Teske, the lead author of the new report, alluded to the understanding held by astronomers that exoplanets do not necessarily have the same composition as their host star due to factors that occur during its formation. On the other hand, she suggested, (sadly for diamond lovers), that the team's new findings make it "less likely" that 55 Cancri e contains a sparkling deep layer of solid diamond bedrock below its surface.

Diamond 'Super-Earth' May Not be as Precious, UA Student Finds, UA News, October 7, 2013

A Planet Made of Diamond, Twice the Size of Earth, Ned Potter via World News, October 11, 2012

55 Cancri 3, (January 4, 2017). In Wikipedia, Free Encyclopedia. Retrieved January 15, 2017 from <https://EN.WIKIPEDIA.ORG>

2017 MEMBERSHIP RENEWAL FORMS HAVE BEEN SENT OUT.

IF YOU HAVE NOT RECEIVED YOURS,

PLEASE SEND US AN EMAIL AT

NASSAUMINERALCLUB@GMAIL.COM

PURPOSE OF THE NASSAU MINERAL CLUB: From By-laws: "The purpose of this Corporation shall be to further and promote the study of mineralogy by means of meetings, lectures, exhibitions and field trips; to stimulate interest in all phases of geology, mineralogy, gemology, paleontology and the lapidary arts, and to do any other act or thing incidental to or connected with any of the foregoing or in the advancement thereof, but not for the pecuniary profit or financial gain of its members, directors or officers." (Article II, Section 2.01, 3/13/2000)