

# UPCOMING SHOWS

2017

May 20-21<sup>st</sup> Celinka Show- Our Lady of Mt. Carmel, Patchogue

May 22-28<sup>th</sup> Wildacres Spring Session

July 29-30<sup>th</sup> LIMAGS Annual Gem, Mineral, Fossil & Jewelry

*For other Gem and Mineral shows:* <http://www.amfed.org/EFMLS/calendar.htm>

[www.suffolkgem.com](http://www.suffolkgem.com)

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*To promote cultural, educational, and scientific interest in mineralogy, and develop member's skills in lapidary arts and jewelry crafts*

April 2017

# THE CONGLOMERATE

*The Monthly Bulletin of the Suffolk Gem & Mineral Club, Inc.*

Monthly Club meetings held at the Bay Shore-Brightwaters Library, Montauk Highway, Brightwaters starting at 7:00pm.

Refreshments served at 7:00 pm.

## OFFICERS

*The Conglomerate Editor - Cheryl Neary  
Club Webmaster - Kerry Dicker*

President –	Cheryl Neary	516.449.5341 cell	Director - Elaine Casani	631-567-3342
Vice President –	Kerry Dicker	631-277-0994	Director – Lucy Jackson	631- 289-2328
Treasurer -	Roberta Besso	631-666-8023	Director - John King	631-775-7035
Asst. treasure	Joe LaBarca	631-242-5290	Director –Debbie Winston	516-238-8370
Secretary –	Rebecca LaBarca	516-768-4438	Director –Pat Seostrom	631.654.0746
Liaison –	Cheryl Neary	516.449.5341 cell	Director – Michael Jung	631.698.3018
			Historian –Kerry Ann Hilliard	631-277-0994

**Cell phones are to be turned off during all Club meetings.**

**More importantly, there should be no disturbances during any guest presentations.**



Happy Birthday Wishes!  
May Your Year Be Filled  
with Hugs & Kisses!

### April Birthdays:

Linda Zisa  
Edna Randall  
Kenny Klecak  
Donna Dholakia

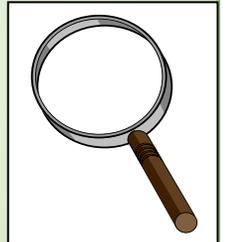
### UPCOMING MEETINGS & EVENTS:

2017

*April 17<sup>th</sup> - Hands- On  
Paint on Rocks with Debbie Winston*

*May 15<sup>th</sup> -Lecture*

*June 19<sup>th</sup> - Annual Bragging Rites*



### Message from the Prez:

This month we will be painting a design on beach tumbled quartz stones. Debbie Winston will be instructing this hands on meeting. The various paint colors, rocks and brushes will be provided.

You are requested to bring a smock for yourself and if you have favorite brushes- Please also bring a box large enough to hold your masterpiece which is approximately the size of an adult fist.

Hope to see you all on April 17<sup>th</sup>!

Cheryl Neary  
Ciervo.neary@gmail.com



### Plan Ahead-

**Annual Picnic weekend of:**

**July 15<sup>th</sup>**

**Raindate July 16<sup>th</sup>**



## Let the Adventures Begin!

### Field Trips for 2017:

June 23-25 – LIMAGS - Gilsum, New Hampshire /TOVECO  
(limited to 20)

LIMAGS Bus Trip -August 12, 2017- Springfield, Ma

August 18– 21 - Kentucky

Any suggestions????

### If you know of any child interested in joining a Pebbles Pup Club

Please have them contact either

Robin Wiley at [rcwiley@optonline.net](mailto:rcwiley@optonline.net)

Or Cheryl Neary at [ciervo.neary@gmail.com](mailto:ciervo.neary@gmail.com)

The Celinka Show is May 20<sup>th</sup> & 21<sup>st</sup>-

We need members to volunteer to represent our club at a table provided to us.

Please see Kerry or myself if you are available to donate time (remember- member in good standings!)

The hours are:  
10am -5pm  
both days!



## Outside The Box

### Synopsis of Last Month's Meeting:

We were pleased to welcome back Judy Ann Olsen. This month she discussed the intrinsic value of gems.

Her power point presentation was excellent!

### What is a Member in Good Standing?

One that:

- Attends (4) Meetings
- Contributes Time to Club Show or the

#### Celinka Show-at the Club Table

(If you are unable to attend the show, there is other show activities you can volunteer for- please see Elaine or Cheryl!)

#### Participates in Club Fundraisers

Remember-this is your club!

This club needs you to participate, in order for the club to grow-

If you have any suggestions for a program, please speak to one of the Board members listed above. If you have an idea for a field trip, please speak to a Board member as well!

Ask what else you can do!

# Large, Exceptional Gem Diamonds Formed from Metallic Liquid inside Earth's Mantle

Dec 16, 2016 by News Staff / Source

New research in the [journal Science](#) explains how diamonds of exceptional size and quality formed — from metallic liquid deep inside Earth's mantle.



World's biggest and most-valuable diamonds like the Cullinan, Constellation, and Koh-i-Noor formed in deep mantle metallic liquid. Image credit: Colin Behrens.

To date, researchers have puzzled over the origin of large diamonds like the famous Cullinan Diamond, discovered in South Africa in 1905; the Koh-i-Noor, found in India in the 13th century; or the widely publicized Lesedi La Ronastone, uncovered in Botswana in 2015.

Historically, research into such diamonds has been nearly impossible due to the high value of the jewels and the fact that they rarely contain inclusions that might shed light on their geological origin.

“Some of the world's largest and most valuable diamonds exhibit a distinct set of physical characteristics that have led many to regard them as separate from other, more common diamonds,” said study senior author Dr. Wuyi Wang, director of research and development at the Gemological Institute of America. “However, exactly how these diamonds form and what they tell us about the Earth has remained a mystery until now.”

Dr. Wang and co-authors studied large gem diamonds by examining their so-called ‘offcuts,’ which are the pieces left over after the gem’s facets are cut for maximum sparkle.

The researchers determined that these diamonds sometimes have tiny metallic grains trapped inside them.

In addition to the metallic inclusions, some of these exceptional diamonds contain mineral inclusions that show the diamonds formed at extreme depths, likely within 224-466 miles (360-750 km) in the convecting mantle.

This is much deeper than most other gem diamonds, which form in the lower part of continental tectonic plates at depths of 93-124 miles (150-200 km).

“This new understanding of these large diamonds resolves one of the major enigmas in the study of diamond formation — how the world’s largest and most valuable diamonds formed,” said study first author Dr. Evan Smith, also from the Gemological Institute of America.

“The composition of the inclusions, however, provides the story.”

The metallic inclusions are a solidified mixture of iron, nickel, carbon and sulfur, also containing traces of fluid methane and hydrogen in the thin tiny space between the metallic phases and the encasing diamond.

Pure carbon crystallized in this mix of molten metallic liquid in Earth’s deep mantle to form diamonds.

Small droplets of this metallic liquid were occasionally trapped within the diamonds as they grew. During cutting and polishing, parts of the diamond that contain inclusions are often cut off or polished away to craft exquisite polished gems with minimal flaws.

“Previous experiments and theory predicted for many years that parts of the deep mantle below about 155 miles (250 km) contain small amounts of metallic iron and have limited available oxygen,” Dr. Smith said.

“Now, the metallic inclusions and their surrounding methane and hydrogen jackets in these diamonds provide consistent, systematic physical evidence to support this prediction.”

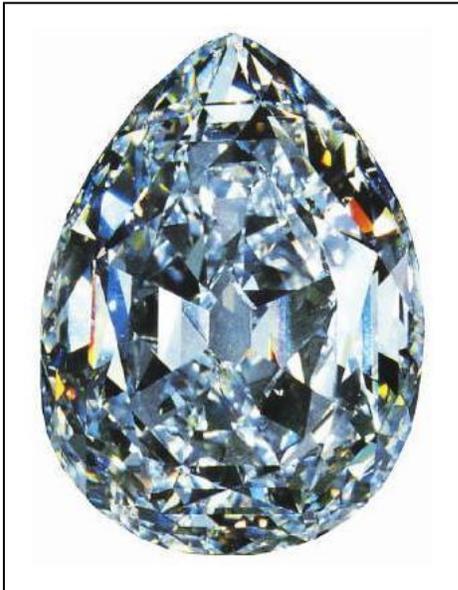
The results are also important for understanding how volatile substances like carbon might cycle through Earth’s interior over time.

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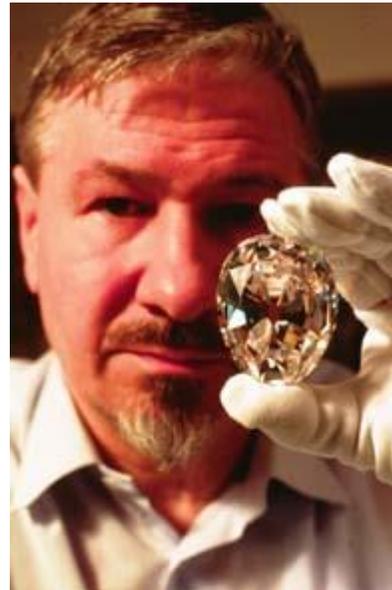
Evan M. Smith *et al.* 2016. Large gem diamonds from metallic liquid in Earth’s deep mantle. *Science* 354 (6318): 1403-1405; doi: 10.1126/science.aal1303

The following is from the website Famous Diamond

<http://famousdiamonds.tripod.com/cullinandiamonds.html>



The Cullinan I - aka the Star of Africa, a pear shaped diamond weighing 530.20 carats, aka the Cullinan I



It measures  $58.9 \times 45.4 \times 27.7$  mm, and has 76 facets (counting the culet and the table). It is called the Cullinan I because it's the largest of the 9 large stones cut from the Cullinan Diamond, and the Cullinan II is the massive 317.40-carat cushion shaped diamond in the center-front of the Imperial State Crown of Great Britain. The Crown also features the Black Prince's Ruby, as well as St. Edward's Sapphire, and the Stuart Sapphire. All the stones in the crown seem to have a history. The Star of Africa holds the place of 2nd largest cut diamond in the world and is on display with the other Crown Jewels in the Tower of London.

The photo below was probably taken in 1908, the year after the Cullinan rough was presented to King Edward VII for his 66th birthday.

