

TAR HEEL



ROCKHOUND

NOVEMBER 2024

Catawba Valley Gem & Mineral Club, Inc.

2024 Officers and Committees

President:	Tracie Jeffries 828-430-1341	Education:	George Max 828-328-9107
Vice President:	Rick Glover 828-446-7634	Show Chairman:	Dean Russell 828-303-1448
Treasurer:	Terry Russell 828-303-1563	Scholarship:	George Max 828-328-9107
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Editor:	Tracie Jeffries 828-430-1341		

Club Address: PO Box 2521, Hickory NC 28603-2521
Regular Meetings: Second Tuesday, 7:00 PM
St. Aloysius Catholic Church, 921 2nd St. NE Hickory, NC
Annual Dues: Family, \$25, Individual, \$18

The purpose of the Club is to increase the individual's knowledge of the earth sciences and to aid in the development of lapidary and related arts and skills; to promote fellowship and exchange of ideas; to hold exhibitions, contests, lectures and demonstrations for educational purposes; to help interest more people in the gem and mineral hobby; and to capture and preserve the beauty of nature, the arts, and the works of man.

CATAWBA VALLEY GEM AND MINERAL CLUB, INC.

Web Master: Mike Streeter

<http://www.cvgmc.com>

Editor: Tracie Jeffries,

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PRESIDENT'S REPORT

Hello Fellow Members,

First, I would like to thank all the volunteers that helped us have a successful October show. It takes a lot of time, planning, work, and dedication so again thank-you for all you do! I would also like to thank the Appalachian State Geology Club students that came down Saturday and did activities with the children. I heard many positive comments from parents. In light of recent events, it was very generous of them to make the effort and time to volunteer!

Second, November is the month to vote! The month to vote for various political offices at the federal, state, and county level. It's also the time to vote for new club officers and positions. According to our Constitution and By-laws, Officers and Board Members are to be elected by a majority vote of members present and eligible at the regular November meeting. Officers and Directors are elected for a period of one year. Up for vote are the Officer positions of President, Vice President, Secretary, and Treasurer. The Board of Directors shall consist of the Show Chairman, Bulletin Editor, and one member at large, all of whom are elected, and the Immediate Past President. If people hold more than one position an additional Member-at-large would be needed. So, what do we actually need? It depends! If all current Officers, Show Chairman, and the Editor agree to serve another term and no one wants to challenge them then at minimum we would need four Members-at-Large to be on the Board of Directors. We will take nominations and vote at the November meeting.

CVGMC MINUTES FOR OCTOBER 8, 2024

There were no minutes for the October 8th meeting. Instead of a meeting the club held their annual picnic at the Polly's.

THANK-YOU FOR A SUCCESSFUL SHOW!

Hey Rockhounds, CVGMC had another successful show held in the Fall. We had 1658 in paid attendance, which exceeded numbers from previous Fall shows. Considering the damage of Hurricane Helene to North Carolina, Georgia, Florida and Tennessee and the number of people we draw from those areas, it was a very successful show. Several of our vendors come from those affected areas and were quite grateful for the timing of the show for

them. We only had one vendor who could not come to the show because of damage to their property.

- I want to thank everyone who helped in set-up and take down, everything went very smooth and quick.
- Thank you to all who put out (and hopefully picked up) the road advertising signs.
- Thank you to George M. for organizing, with Exodus, the delivery and removal of the Club's stock.
- Thank you to Tracie J. for organizing the exhibit area and making sure it ran smoothly.
- Thank you to Richard and Shelda A. for their awesome fossil display and for having it available all three days.
- Thank you to the Rick and Joan G. for organizing and running the Children's Table all three days. Also, all those who assisted them at the Children's Table. It was a big hit as usual.
- Thank you to George B, Wayne, Ben H. and anyone else who worked at the Mini Mine. The kids and parents loved it!
- Thank you to Jimmy S. and others for their time at the CVGMC Demonstration Table.
- Thank you to Ron T. at our "Ask the Expert" table for answering all the questions put to you.
- Thank you to Terry R. for organizing the Ticket and Grab Bag Sales and all those who sold tickets and grab bags.
- Thank you to Club members who helped out on the main floor assisting the vendors when needed, especially "Batman".

Without all the Club Members kindly volunteering their time and skills, there is not a way CVGMC could have such an awesome show. According to the vendors, CVGMC has one of the best shows in North Carolina. Thank you all again for your help. One additional thank you goes to Terry R. for putting up with my craziness at home while working on the show.

Our next show is right around the corner, March 28-30, 2025. The show will be dedicated to longtime member, Larry Huffman, who passed away in April. Larry was very involved in CVGMC and his absence is greatly missed. CVGMC is also hosting the AFMS and EFMLS conventions at our show. The show theme is tentatively, "All in the Family". So, start thinking what "family" or groups of minerals you have in your collection that you would like to display at the show.

Sincerely,
Dean Russell
CVGMC Show Chairperson

P.S. – If you have any suggestions for future shows and/or critiques of this past show, please email me your comments. I am always looking for possible ways to improve the CVGMC Show experience.

GEM SHOW RESULTS

We had a very successful show and the total paid attendance at the October '24 show was 1,658 which surpasses our previous fall show in November '22 by 267. The vendors were very pleased with the amount of activity considering what our Western NC community is going through. We also collected slightly over \$500 for the grab bags and geodes in addition to several donations.

Terri R.

NOVEMBER PROGRAM

Our November speaker will be Shields Flynn. He will be discussing his new book "Unearthing North Carolina's Mineral Treasures". He will have books available for purchase (70\$) and will be happy to sign your book.

ANNUAL CLUB CHRISTMAS PARTY AND AUCTION

The Christmas party and Auction will be held on Tuesday, December 10 at the Club's regular meeting. The meeting will start at 6:30pm instead of the regular time of 7:00pm. The meal will be catered by Publix Deli again this year. Chicken tenders and several side dishes will be provided. All who attend are asked to bring a drink or dessert. The Club will provide the plates, cups, napkins, silverware and ice. Come early, if you can, to help set up the room.

2024 DECEMBER AUCTION INSTRUCTIONS

It's that time of year for our annual auction. Anyone interested in participating in the auction (selling AND/OR buying) needs to have a number assigned to them (1, 2, 3, 4

etc.). Terry will have a list of numbers and stickers at the November meeting so you can sign up for a number and get stickers to label your specimens at that time. If you are not able to attend the November meeting and would like to participate, please call her (828-303-1563) to get a number. If you don't get a number and stickers before the December meeting, they will be available the evening of the auction, however please come early. Terry will be at the church by 5:45pm for anyone who hasn't signed up to participate and needs a number and/or stickers.

All specimens must be clearly identified with a sticker which should be coded with your assigned number because this is what will be used during the auction process. Please label your specimens as follows (using this example): if your assigned number is 2 and you plan to sell 5 items then the stickers should be labeled as 2a, 2b, 2c, 2d and 2e. It is VERY important to label ALL specimens so the correct information is recorded. This same number will also be your bidding number. Terry will have bidder cards at the meeting with the numbers on them for people to hold up when they are bidding. This process should keep things moving and will make it easier to record the sellers and buyers. Please also include a description of the item. Items will be auctioned off in order to make it fair for everyone. It will go as follows: 1a, 2a, 3a...etc., then start over at 1b, 2b, 3b...etc. so label your items in the order that you want to sell them, with your best item being the first one.

We will sell as many items as possible in the time that we have (ends at 8:45 PM). There is no limit to the number of items a Club Member can bring. Anything rock related can be auctioned; this includes tools, cut stones, display boxes/cabinets, rough stones, jewelry, etc. Members will retain 100% of the sale price unless the member specifies all proceeds go to the club. Please come early to preview the items and make notes (including the number on the sticker) of the ones you are interested in bidding on so that you'll be ready when the item comes up for bidding. To keep things moving the items will not be walked around during the auction.

Items will go up in price by \$1.00 increments per bid until it reaches \$25.00, then bidding will go up by \$5.00 increments per bid until it reaches \$50.00. Once it reaches \$50.00, bids will go up by \$10.00 increments per bid. Once the bid reaches \$100.00, bids will go up by \$20.00 increments per bid. Bidding increments can change at the discretion of the auctioneer. If you have an item that you want started at a minimum bid, please note it on the label ahead of time.

Remember, guests are welcome, so feel free to bring a friend. They can bid on items, BUT cannot sell items.

Payment method: Only cash or checks accepted, no plastic (credit cards).

GEOLOGY MADE EASY: WHAT IS A TEKTITE?

By Tracie J.

First, I would like to emphasize that tektites are not meteorites. Meteorites are of an extraterrestrial origin, they originate in space and enter the earth's atmosphere. As they travel through the atmosphere they are meteors and when they strike the earth's surface they are called meteorites. Depending on their origin they are made up of various materials.

Tektites are terrestrial in origin. When larger meteorites hit the earth's surface they hit with great velocity, heat, and force. This melts materials (soils, rocks, and minerals) on the earth's surface and throws these melted materials high into the earth's atmosphere. As this molten material falls back to the surface it cools quickly preventing recrystallization. Chemically tektites are around 70 % silica plus other trace materials that vary depending on the site of impact, and they contain no water (unlike obsidian). They are basically an amorphous natural 'glass'!

Tektites also differ from other 'impactites'. The term 'impactite' is a generic given to, "Rock created or modified by one or more impacts of a meteorite." (Source 1) Other types of impactites include impact melts, impact glass, impact breccia, and various shocked items such as shatter cones (see Chart 1 and Table 1). These impactites differ from tektites in that they form at or near ground level and are found in the vicinity (proximal) of the impact crater. Whereas tektites are formed from material ejected high into the atmosphere and can be found long distances (distal) from the original impact crater. Tektites are found in large geographical areas called 'strewn fields'. There are four major strewn fields and multiple smaller sites (see Table 2 and Image 1).

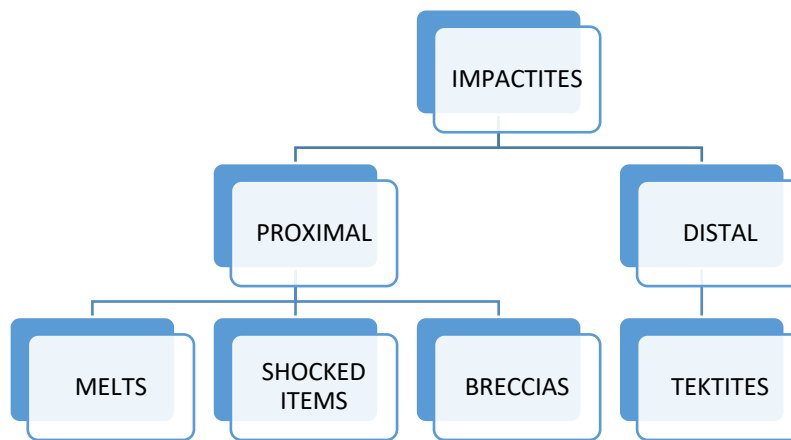


CHART 1: A basic flow chart showing the different major types of 'impactites'.

IMPACTITES	BASIC DESCRIPTION	EXAMPLE(S)
Impact Melt	Molten rock formed from the intense heat and pressure generated by a meteor strike	This creates of impact 'glass' along with other melt rocks Pica Glass Darwin Glass Libyan Desert Glass Wabar Pearls Aouelloul
Impact Breccia	Rocks made up of various sized clasts from broken rock imbedded in a matrix of smaller clasts, crystallized impact melt, or impact glass	Popigai Breccia Odessa Breccia Glover Bluff Impact Breccia Black Onaping Impact Breccia Alamo Breccia
Shock Items	Rocks changed by the effects of shock-wave deformation and heating during meteorite impacts	Shatter Cones Planar Fractures

TABLE 1: Summary of proximal impactites.

STREWN FIELD	AGE (Million Years Ago)	CRATER and LOCATION	TYPE OF TEKTITE(S)
Australasian Field (AKA Indochinite Field)	.7000	Unknown – never found	Australites, Javanites, Indochinites and Philippinites
Ivory Coast Field	~ 1.07	Bosumtwi Crater, Ghana, Africa	Ivory Coast Tektites, AKA 'Ivorites'
Moldavite Field	~ 14.8	Nördlinger Ries Crater, Germany	Moldavite
North American Field	~ 35.5	Chesapeake Bay Crater, Virginia, USA	Bediasites and Georgiites

TABLE 2: Summary of major tektite strewn fields.

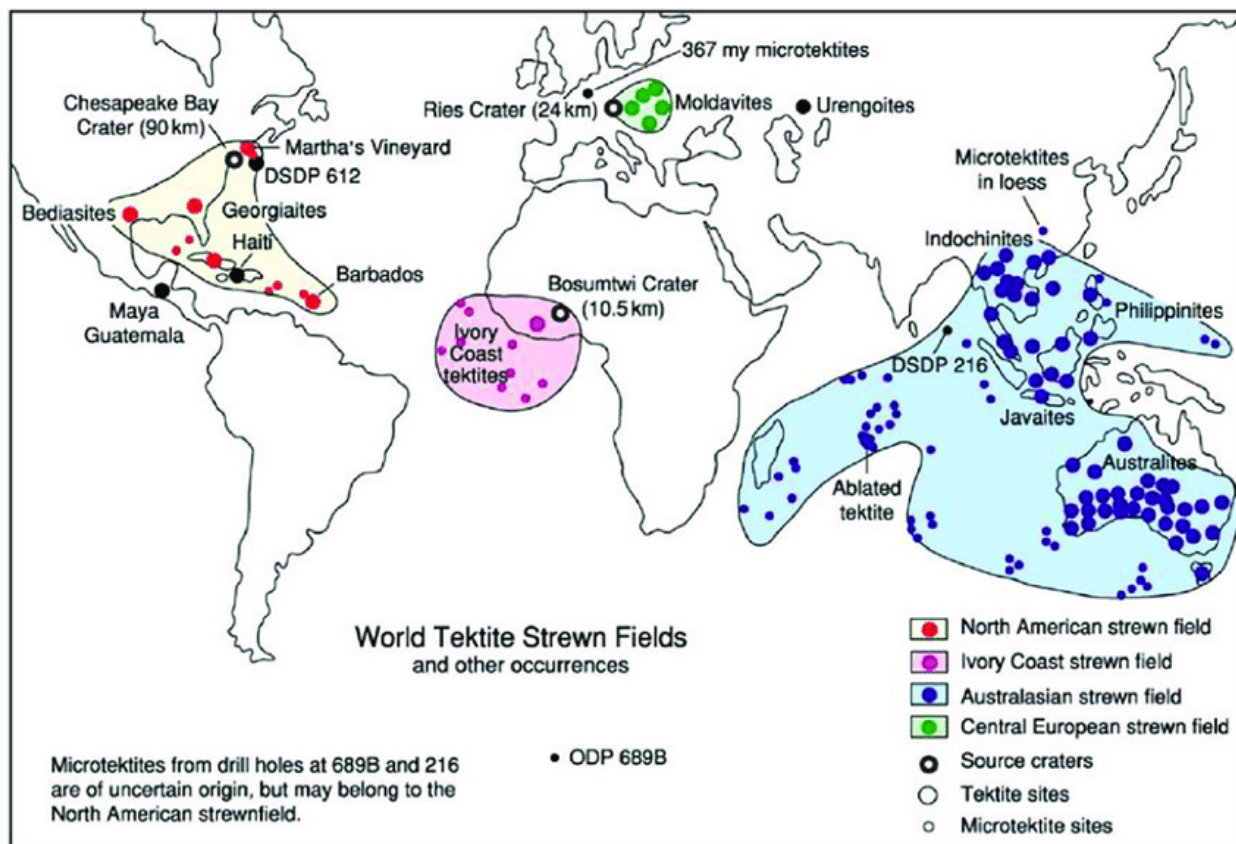


IMAGE 1: Major tektite strewn fields.

<https://www.researchgate.net/profile/John-Mccloy/publication/335340868/figure/fig2/AS:830547278438401@1575029310151/Tektite-strewn-fields-figure-reproduced-from-Encyclopedia-of-Geology-40-with.png>

Moldavite is the name given to tektites from the Nördlinger Ries Crater, in southern Germany. The meteorite that formed the crater impacted approximately 15 million years ago. The strewn field covers parts of Germany, Austria, and the Czech Republic. Most of the material seen on the market today comes from the Czech Republic. Moldavite is unique among most tektites because of its unique color and gem-like quality. Moldavite can be translucent to transparent to opaque, and color ranges from a mossy green, to yellowish-green, to a brown-green. They tend to have a very textured surface due to etching by natural acids in the groundwater where they are found (see image 2). Moldavites also have a vitreous luster but this is usually toned down some due to weathering and erosion.

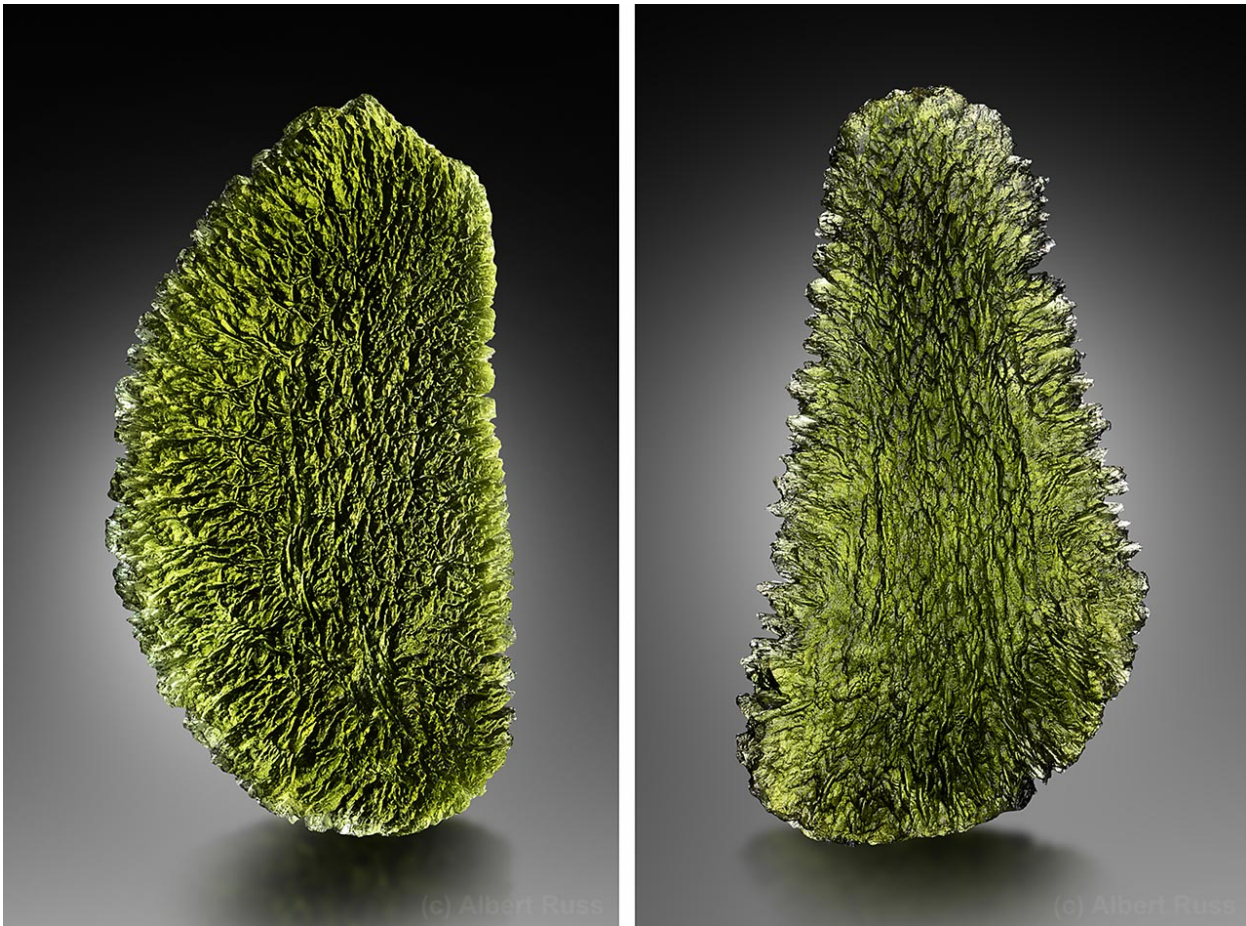


IMAGE 2 : Real Moldavite from the Czech Republic. Albert Russ photos. Notice the irregular shapes and edges, olive green color, highly textured surface, and translucency.

<https://mineralexpert.org/article/moldavite-beautiful-czech-tektite>

Moldavite is a unique stone to add to your collection. Unfortunately, there are a lot of fake tektites, especially Moldavite, on the market (see images 3 and 4). So how can you tell if your tektite is real or fake? There are several key things you can look for in Moldavite and other types of tektites.

1. Every tektite is unique in shape and size. If a dealer has multiple tektites similar in shape and size they were probably made in a mold. Be wary!
2. The surface of tektites usually has a combination of irregular pits, grooves, and/or flow lines.
3. Tektites have inclusions. You may need a microscope to see the inclusions.
 - Look for air bubbles, rounded or linear, and even lines or streams of bubbles (see image 3).
 - Nearly all tektites have pure silica glass particles known as lechatelierite (see image 3).

- Similar to lechatelierite are schlieren rays (also referred to as streaks or lines). These streaks represent differences in texture or composition from the main mass due to incomplete mixing when molten (see image 3).
4. Tektites also have unique chemical signatures depending on their location. However, this type of analysis is beyond most collectors.

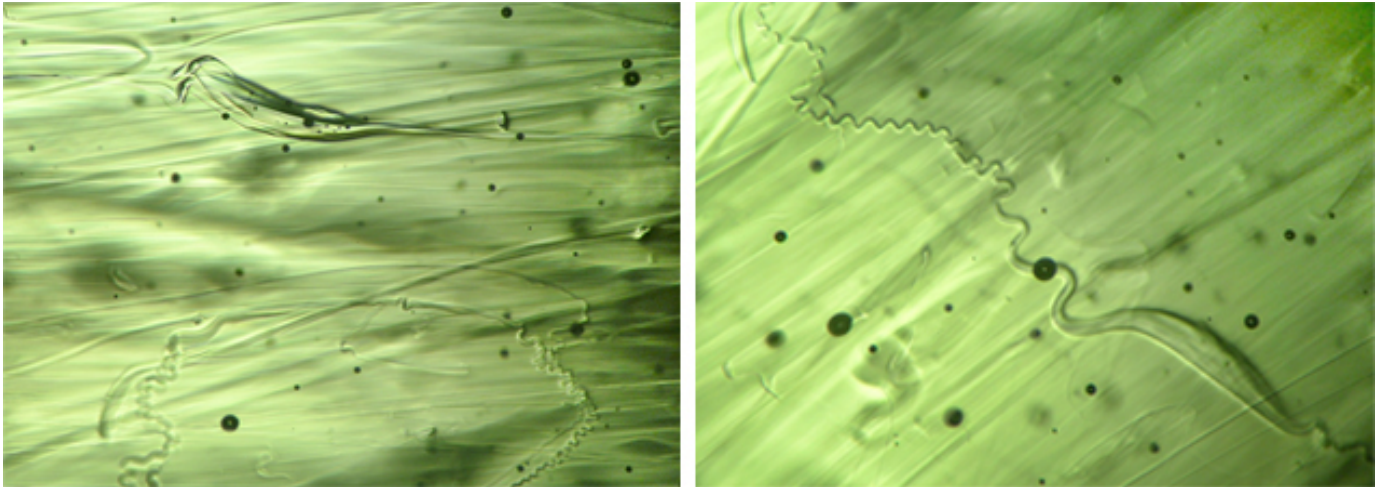


IMAGE 3: This is a piece of real Moldavite under magnification. Notice the irregular sized air bubbles, stringy lechatelierite inclusions, and schlieren lines/rays.

<https://www.dreamerapothecary.com/blog/all-about-moldavite-what-is-it-and-how-can-you-tell-if-its-real/>

5. Do your research! Know what the typical colors, sizes, prices, surface features, and inclusions are for the specific type of tektite you are thinking of purchasing.
6. Buy from a reputable dealer and be careful of on-line sites. Many will advertise with a mix of real and fake tektites, but will only send you the fake tektites. Check the reviews!
7. Be suspicious of super low prices, tektites are relatively rare and the prices should reflect that fact.



IMAGE 4: The Moldavite on the left is real and the stone on the right is fake. Notice that the fake stone is a very bright green, very glossy, and all the pits are essentially the same size and shape. It is basically cheap green glass.

<https://arkadia.cc/blogs/the-world-of-gems/fake-moldavite-how-to-know-the-difference-between-real-moldavite-and-fake-green-glass>

The North American strewn field is the oldest known field and was formed by a meteor impact approximately 35.5 million years ago. Today the impact crater is about 53 miles in diameter and found under the Chesapeake Bay off the coast of Virginia. The field covers the southeastern US (mostly coastal areas from New Jersey to Texas) and down into the Caribbean Sea. Tektites from this impact are found in two major areas. One type referred to as Georgiites are found primarily in the central and eastern counties of Georgia with a few found in South Carolina. They appear black but back lighting will show that they are translucent and yellow to greenish-yellow in color. Most are elongated or rounded tear drop shapes with smooth edges and pitted surfaces (see image 5). They are very rare and highly valued by collectors! The second area where Chesapeake Bay impact Tektites are found is in the eastern part of Texas. These tektites are called Bediasites after the small town of Bedias, Texas. All the finds for Bediasites seem to be centered around this town and the surrounding counties. These tektites have a greater range of color from black to a dark brownish green to green (see image 6).

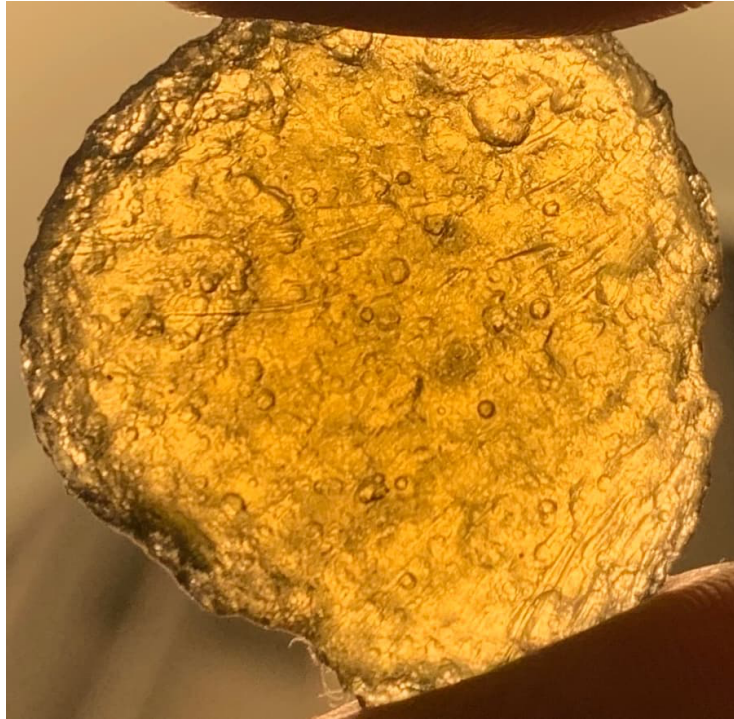


IMAGE 5: A translucent Georgiite, found in Dodge County, Georgia.

(Photo by Megan Ruffin) <https://www.gemsociety.org/article/tektite-jewelry-and-gemstone-information/>



IMAGE 6: A Bediasite from Texas. Note the dark color, pitted surface, and aerodynamic, elongated, tear-dropped shape.

<https://meteolovers.com/product/impactites/tektites/bediasite>

Indochinites are found throughout the Australasian Tektite Strewn Field (aka Indochinite Tektite Strewn Field). These are the youngest tektites, approximately 700,000 years old. They are also found in the largest strewn field covering more than 10 % of the Earth's surface. Indochinites have been found in South China, Vietnam, Thailand, Malaysia, Australia and the Philippines. Because they are found in such a wide geographical area they often have regional names such as Australites, Thailandites, Philippinites, or Vietnamites. But they were all formed by the same impact event. Unfortunately, the impact crater has never been found. Indochinites are usually black, have a vitreous luster, and exhibit a large variety of shapes (see images 7-12). Some of these shapes are very unusual and rare such as the Australian Flanged Button (see images 10 and 11). The aerodynamic shape of the Flanged Button actually inspired the design of the re-entry modules for the NASA Apollo program in the 1960's (Resource 5).

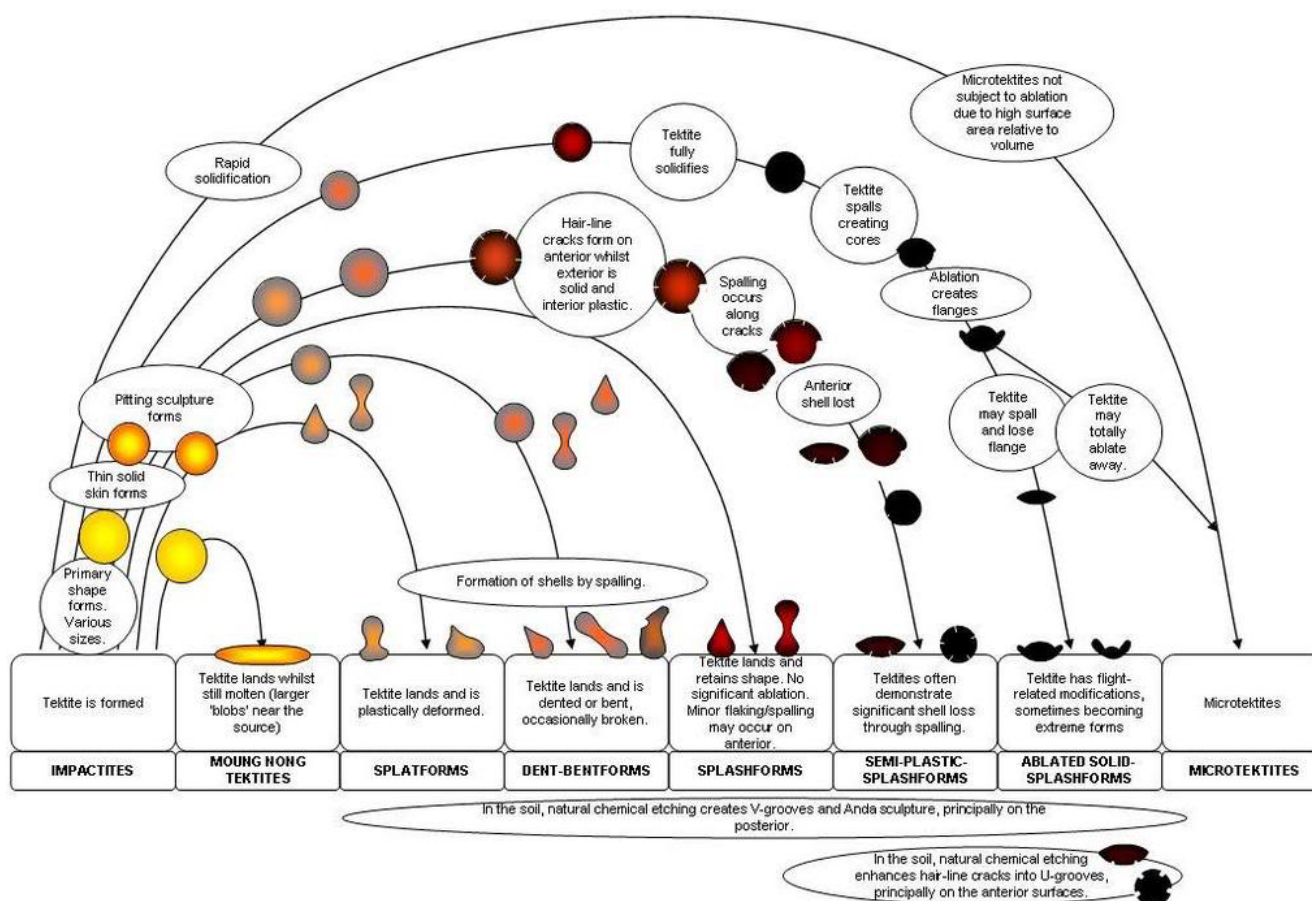


IMAGE 7: Tektite shape varies depending on factors such as, original material, ejection force and velocity, viscosity, centrifugal and gravitational forces, and other influences.

<https://tektites.info/primary-shape-formation>



IMAGE 8: A nice dumbbell shaped tektite! Thailand Splash Form Indochinite
Tektite From The Darryl Futrell Collection of Tektites
<https://www.meteorites-for-sale.com/thailand-tektite-mit-61.html>



IMAGE 9: Rizalites are unusual tektites in the Indochinite
strewn field in the Philippines. Many are rounded spheres with
deep grooves and channels across the surface.
<https://www.meteorites-for-sale.com/rizalite-tektite-181-4g.html>



IMAGE 10: An Australian Flanged Button Tektite
<https://golddetecting.forumotion.net/t25984-australites-have-any-many-members-come-across-these-whilst-detecting>

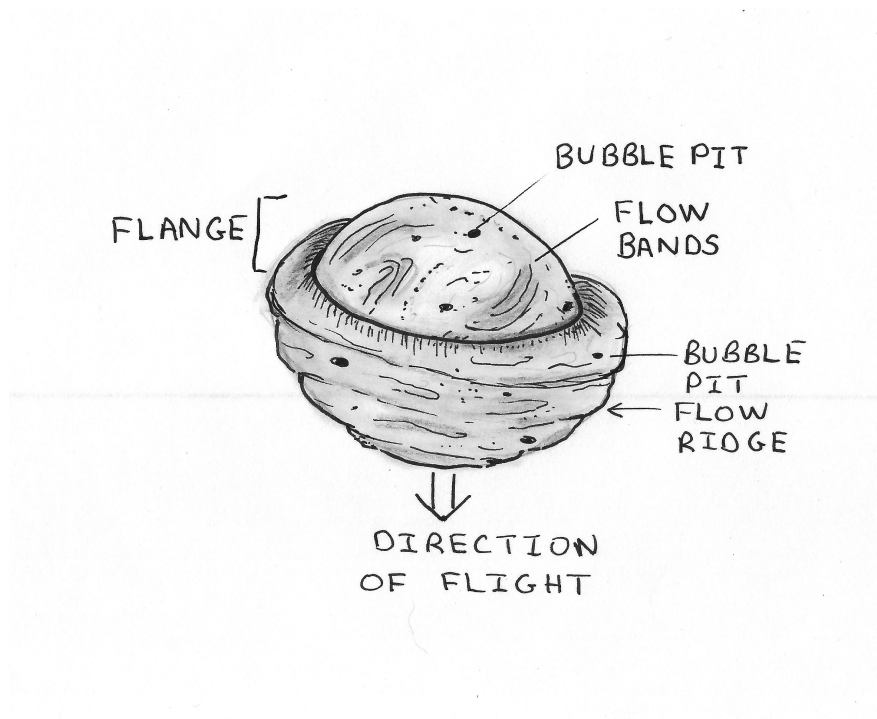


IMAGE 11: Anatomy of an Australian Flanged Button
 Image Drawn by Tracie J.

Ivory Coast tektites formed during an impact approximately 1.07 million years ago. The impact crater, Bosumtwi Crater, is located in Ghana, Africa. These are some of the rarest tektites. Most specimens are in private collections and they seldom seen on the market for sale. They are so rare that unscrupulous dealers will take tektites from other areas and relabel them as Ivory Coast Tektites to demand higher prices.

The tektites are often are called 'Ivorites'. Ivory Coast tektites are black, opaque, often round, with small very typical vacuoles (see image 12). They are also relatively large compared to average size of other tektites.



IMAGE 12: An Ivory Coast tektite, note the black color, round shape, and vacuoles.

<https://www.meteorites-for-sale.com/>

In summary, tektites are fascinating artifacts associated with ancient meteorite strikes. Collectors and scientists are drawn to them because of their rarity, unique properties, and mystery. There are still many aspects of tektites that are unknown and controversial and research continues. Therefore, if one decides to collect tektites they should educate themselves, and buy with caution. I listed some of my resources below for additional information and reading.

RESOURCES:

1. <https://en.wikipedia.org/wiki/Impactite>
2. <https://mineralexpert.org/article/moldavite-beautiful-czech-tektite>
3. <https://craterexplorer.ca/tektite/>
4. <https://tektites.info/primary-shape-formation>
5. <https://en.wikipedia.org/wiki/Australite>

WHAT'S HAPPENING IN OUR AREA

WHAT	WHEN	WHERE
Treasures of the Earth	Nov, 15-17 Hours: Fri Noon-6:00 Sat/Sun 10:00-5:00	Address: 4285 Trinity Rd North Carolina State Fairgrounds Raleigh, NC 27607
GTS Gift & Jewelry Show	December 6-8, 2024	Greensboro Coliseum Complex, 1921 W Gate City Blvd, Greensboro, NC

Tar Heel Rockhound
Official Publication of
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Volume 54 Number 11

Club Meetings

2nd Tuesday of Month, 7:00PM

St Aloysius Catholic Church

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