



Fall Calendar

Quarry trips: Martin Marietta has made a business decision to suspend all fossil collecting at all quarries indefinitely. Other collecting opportunities are possible, check email for announcements.

September

17 **NCFC Meeting-** NCMNS, 11 West Jones Street, Raleigh. 1:30 pm, Level A conference room and via zoom. Speaker will be Haviv Avrahami, the topic to be announced. Check email for details.

October

22 Picnic- Fall Picnic at Lake Crabtree Park in Morrisville, NC. Check email for details.

November

4 **NC Fossil Fair-** Catawba Science Center in Hickory, NC. Exhibitors and volunteers needed. Contact Darryl Grater at ncfossilfair@gmail.com.

President's Message

Recently, I have been noticing more and more groups posting on the internet about Fossil Collecting, and lots of help for folks trying to identify the fossils they have found. There are often some impressive pictures on these sites, and a lot of beginners needing help. While this is pretty common nowadays, I got to thinking about all the people that have been my mentors through the years as I got more and more involved in collecting. I remember first visiting Topsail Beach after moving to North Carolina, and learning about shark teeth and other treasures you could find there from some other beachcombers. Wow, that was so exciting! It did not take long before I was hooked. Back then, I knew hardly anything, and soaked up the knowledge that was shared with me. At that time, it was mainly in person, for the internet was not yet around. I am sure a lot of you can recall the days when you were just beginning this amazing hobby, picking up unfamiliar specimens, and looking through books and reference sources trying to figure out just what that weird and interesting thing actually was! I count myself lucky to have met people in the 1980's at the NC Museum of Natural Sciences who

were always happy to look at things and ID them, Professors from UNCCH and from Guilford College who inspired me at a teacher workshop on fossils I took in Cullowhee, and meeting numerous members of the NC Fossil Club on trips to PCS in Aurora and other places who shared specimens with me to help me learn. There have been so many, I decided not to list names because I am sure to leave out someone! There was never a time I could not find someone willing to help me get accurate information on a specimen I found, and NCFC Members are still the best source, especially with finds from local sites.

Later on, I was fortunate to have met quite a lot of well-known paleontologists through a lot of different events and experiences. They have also been willing to answer questions, and look at specimens that had me baffled. Today, while I learn a lot from the internet, I still appreciate the people so much more for taking time to teach me. I am so pleased to be able to share all the things I have learned over the years with others- students, teachers, fellow NCFC members, and people I meet out collecting or at Fossil Fairs and other events. This past weekend, several of us exhibited at the Dino Academy at the Museum of Life and Science in Durham. It was well attended, and visitors had lots of interesting questions for us. A few even brought specimens for us to identify, and everyone had a lot of fun sharing stories and showing our favorite specimens. At the end of the day, I was told that overwhelmingly, people commented on how much they appreciated the club members for being willing to answer questions and share information. While I admit I enjoy reading posts on Facebook or other social media, and sometimes comment on great finds or respond to the requests of "What is this?", I still prefer to have these face-to-face conversations. That is why I always look forward to our meetings, and enjoy events like the Fossil Fairs and other outreaches.

We are indeed fortunate to have such a great community of fossil enthusiasts willing and able to be a resource for one another. With collecting opportunities being slow of late, we can still find many ways to maintain our connections and spend time together, like picnics and social gatherings. I would love to hear from you if you

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have ideas for activities the club can plan to do. There are still many ways we can learn and grow together. For example, I have just learned that the Greenville Museum, A Time for Science, is moving to new and larger facilities. It will be closed for a few months while the move takes place, but it might be fun for us to plan a club trip to visit the new facility when it opens! At last year's Fossil Fair, several of us got to tour the Duke Lemur Center Fossil Primate Division, but I am sure there are others that could not be there then that might like to do that as well. So, let's keep mentoring each other, and make plans for sharing many more good times together.

Terry Denny
President, NC Fossil Club

Photos of the NC Fossil Festival held in June at Aurora, NC



Trip to the Ediacaran of Newfoundland

Eric Sadorf

In May of this year, my wife Teri and I traveled to Newfoundland on vacation. We visited one of the places on my bucket list, the Ediacaran Period fossil locality at the Mistaken Point Ecological Reserve, located on the southeastern tip of Newfoundland. These fossils represent some of the oldest multicellular organisms known, over a half billion years old. Fossils from the Drook Formation within the Ecological Reserve are some of the oldest Ediacaran fossils yet found at 579 million years ago. The fossils we viewed were from the Mistaken Point Formation, dated around 565 million years ago.

We flew into St. Johns, Newfoundland, which happens to be where the first Precambrian fossils were found in 1868 by a Scottish geologist named Alexander Murray. These fossils were later described by Canadian Paleontologist Elkanah Billings and consist of disc-shaped fossils named *Aspidella terranovica*. Teri and I went to a museum named “The Rooms” and saw these very fossils on display (photo 1 and 2). Later, we were walking downtown and noticed that the outcrop two blocks from our hotel was the same outcrop in the photograph from the museum (photo 3). I spent the next few minutes looking over the outcrop and saw one potential *Aspidella* fossil.



Photos 1 and 2. Museum display showing Ediacaran fossils found in St. Johns around 1868 by Alexander Murray.

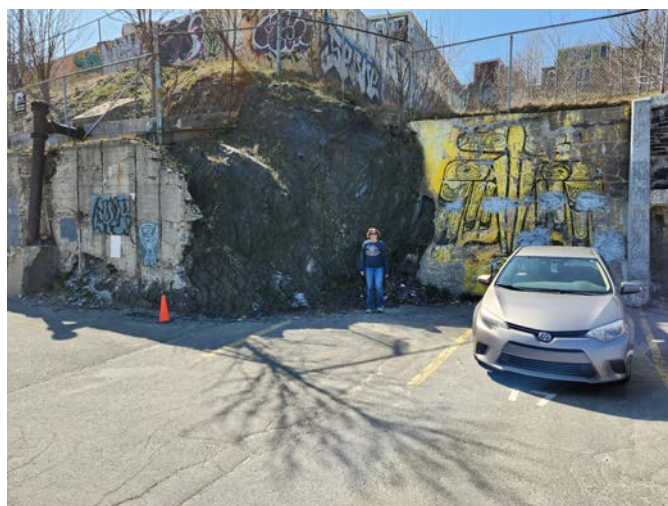


Photo 3. Teri standing in front of the outcrop in downtown St. Johns where the first Ediacaran fossils were found in Newfoundland.

During the 2-hour drive from St. Johns to the Mistaken Point Ecological Reserve, we were surprised to see our first iceberg as we passed the small town of Ferryland (photo 4). Days later, icebergs became a common site as we drove along the northern part of the province. We arrived at the Mistaken Point Ecological Reserve and checked in at the small museum. A group of 6

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visitors plus 2 guides made the short drive to the trail head where we parked and had a 30-minute walk to the site. It was very windy and cold, but the scenery was nice. We saw several species of plants and animals normally found further north in the tundra, including caribou and ptarmigan and stunted forests of trees no taller than 3 feet.



Photo 4. The first iceberg of the trip. This was seen on the drive between St. Johns and Mistaken Point.

After the 30-minute walk we arrived at the fossil site. This site was discovered in 1967 by a geology graduate student doing research on the Precambrian strata of the area. Local fishermen and their families had noticed the fossils before this but didn't realize what these fossils represented. The small area that we were allowed to walk around in to look at the fossils is within the Mistaken Point Formation. There are two main beds with abundant fossils on the bedding plane surfaces. The first thing we did before stepping onto the fossil site was to take off our shoes to help prevent wear and tear on the fossils. There have been several thousand specimens found in the Reserve, representing about 30 species.



Photo 5 and 6. Two views of the fossil locality at the Mistaken Point Ecological Reserve.

I've included several photos of the fossils. Some I've been able to identify, most I haven't. The best way to photograph these is under low light conditions of early morning or near sunset. We were there on an overcast rainy day which made photography difficult, even though the fossils were easy to see.

If you would like to watch a good presentation on the Ediacaran of Newfoundland, the following Youtube video is very informative. You will have to copy and paste the web address into your browser to see it.

https://www.youtube.com/watch?v=gZOBKyN6j_M

Ediacaran fossils have been found in North Carolina. Chris Tacker from the Museum of Natural Science in Raleigh wrote this blog 2013. It mentions NCFC club members Ruffin Tucker and Tony Furr (deceased).

<https://naturalsciencesresearch.wordpress.com/2013/10/15/earth-science-week-fossil-day-ruffins-slab/>

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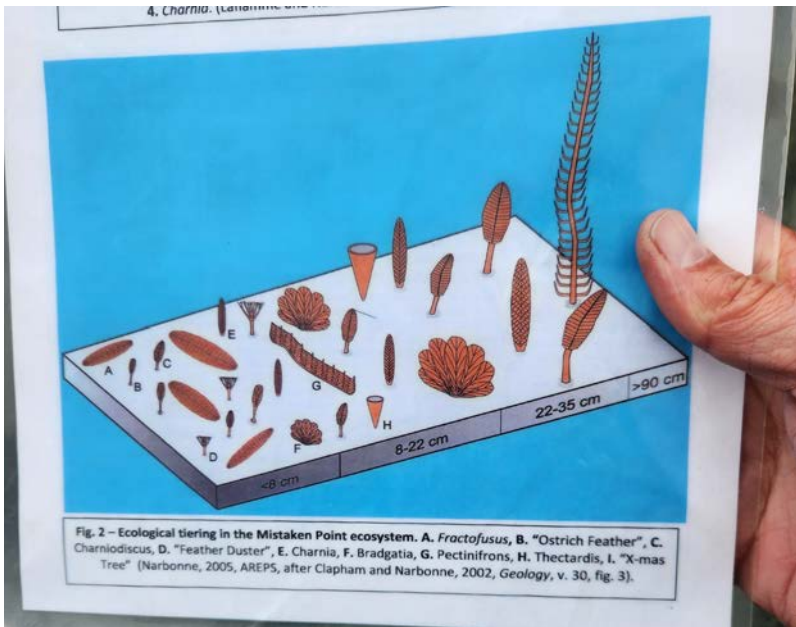


Photo 7. Handout illustrating the fossils found at the Mistaken Point Ecological Reserve.

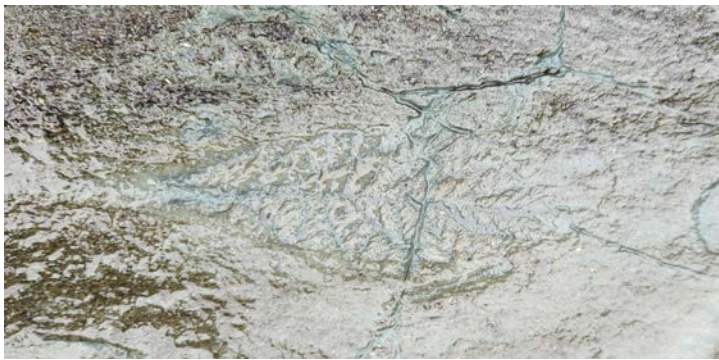


Photo 8. Beothukis.



Photo 9. Charniodiscus.



Photo 10. Fractofusus.



Photo 11. Pectinifrons.

The following summary was provided to our club by Lee Cone and discusses the results of a Paleontological Society Survey

**Amateur/Avocational Paleontology
Survey Results and Discussion**

The Collection's Sub-committees of the Paleontological Society, has been created to study and discuss topics, which concern collections and collection departments and repositories, containing paleontological fossils from around the world. One of the efforts put forth by the sub-committee was to create a survey, posing questions seeking information and concerns that might be raised among the paleontological community. It was felt that a survey could provide useful information that could be quantified and would provide feedback to the entire collections community at large. We also hope that this information would serve to acquaint all paleontologists with knowledge and information that they may not be aware of outside of their specific educational niche. By compiling data on multiple topics and areas of importance it was felt that we could highlight areas of concerns, validate areas of progress, and share data in areas where misconceptions may exist.

Our survey was prepared in house by the collections sub-committee and sent out to membership of the Paleontological Society, membership of major amateur fossil clubs across the United States, and professional paleontologists attending the GSA Annual Meeting in Denver, CO 2022. Data was provided by a total of 814 respondents, 121 of those designated themselves as amateur/avocational paleontologists. The remaining 693 were either early career or professional paleontologists, including collection managers, professors, research professionals, educational retirees, etc.

Results for the amateur/avocational respondents of the survey

Note: This portion of the survey ONLY refers to survey respondents who were non-professional, avocational/amateur paleontologists.

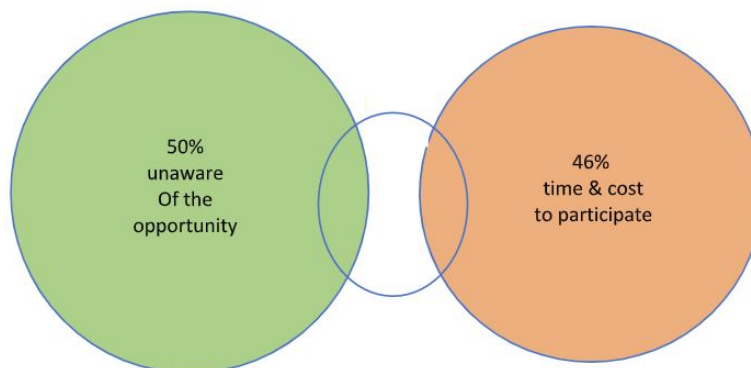
1. To the question: "Do you have a personal (private) fossil collection?", 85% answered "yes". This is significant, since owning a collection that is not under curation opens up questions involving potentially rare specimens or research valuable specimens that may be within those collections, and what will happen to those collections in the future. Open ended free response follow-up questions sought to investigate the avocational collector's thoughts and ideas regarding personal collections and the future of those collections.
2. To the question: "Have you considered donating your private collection to a university or museum for repository curation?" 76% answered "yes". This question will be looked at in more detail in response to other survey questions.
3. To the question: "Have you ever donated rare specimens to universities/repositories/museums?", 52% answered "yes". This may seem to be an unusually high percentage, but one must remember that a voluntary survey would more likely be completed by more responsible collectors, therefore skewing the results.
4. To the question: "Have you donated specimens temporarily or set up permanent displays for the public? For example, at small museum", 53% answered "yes". This would seem to indicate a willingness among amateur collectors to be a contributing part of the paleontological community at a grass roots level in an effort to educate the public about the paleontology or their collections.
5. 63% answered "yes" to the question: "Have you ever volunteered to work with professional paleontologists on a fossil site?" For those responding "yes" to this question, a follow-up question asked for the state where the site was located. The graphic below visually shows the widespread cooperative range of site locations involving avocational support and assistance in paleontological research.

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States representing co-operative fossil-site collaboration of avocational and professional paleontologists, as presented from data compiled from the *2022 Paleontological Society Survey results*.



For those who responded “No” to the same question, the follow-up question sought insight as to why they did not volunteer at a site. Interestingly enough the answers fell into two groups. Fifty percent stated that they were unaware that such opportunities even existed, with many stating that they would love to have the opportunity to work with paleontologists. Forty six percent cited lack of time or the personal expense involved as the limiting factors preventing them from participating. There was a small crossover where both factors played a role in a decision not to participate.

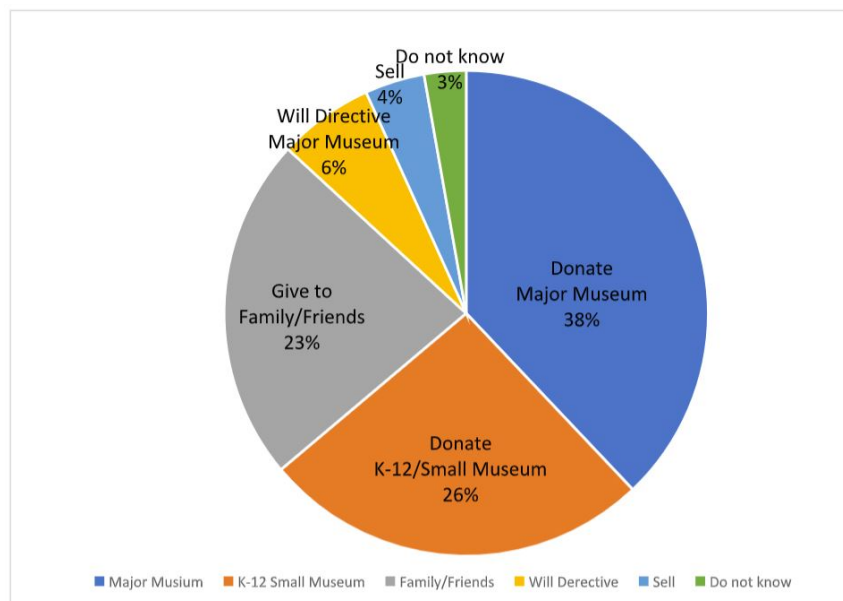


A question was asked: “Would you be willing to open your collection up to scientific study and have collection information posted on a professional resource link for academic research (open only to Paleontological Society members)? Three-quarters (75%) responded “yes”, while a quarter (25%) said “No”. For those willing to share their collections with professionals, a follow-up asked if there were conditions that should be associated with collection sharing.

- a. Many did not feel as though conditions were necessary and many felt as though it would be an honor to have a professional take an interest in their collection.
- b. Some worried about security and did not want personal information to get out
- c. A number felt as though their collection was not important enough
- d. Quite a few insisted that credit be given to the collector in publications
- e. A number wanted to be included as an author in any publications surrounding their collection
- f. Some were insistent on an ownership clause
- g. Many did not want their collection broken up
- h. Finally, a number were unsure

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The final question was also quite interesting. “What do you want to happen to your collection upon your death, or later in life when it becomes difficult to continue to care for?”



From the data collected the results indicated that the surveyed amateur collectors cared enough about their collections that it was important to maintain stewardship through thoughtful donation. Whether protected by a will or trust or through personal late in life donations, fully seventy percent (70%) of the collections are destined to survive in the hands of professional paleontologists. It was interesting that only 4% were to be dispersed through market sales.

Conclusions

It seems that several conclusions can be drawn from the survey.

1. Professionals who wish to utilize additional help at dig sites and lab prep work, can successfully take advantage of sincere amateur collectors in order to lighten their load, have more eyes on the ground, and move more over-burden by utilizing amateur/avocational participants. In order to be successful though, clubs and organizations need to be contacted, so that their members are aware that there are actually opportunities for them to assist and be a part of the paleontological community.
2. Sharing a private collection with professionals seems on face value to be a novel and beneficial idea, especially with a high percentage of owners (75% survey results) willing to share their specimens. But there are drawbacks and facts that many in the amateur community are not aware of and need further educating on research qualified specimen's collections before that topic could be seriously addressed. There is the question of non-repository use in research, which the amateur may not be aware of. There is also a hint of distrust among some amateurs of losing ownership, and possibly losing a fossil. The later comment was noted a number of times. Skepticism of the professional motives would need to be addressed by professionals and adhered to in a professional manner, but in time a working relationship could be beneficial for both sides. Many amateur responders felt that their collections lacked the provenance for research based sharing, and they are probably correct in their assessment, but again education by professionals as to the importance of GPS locations, site and formation data, and other pertinent provenance information, which is essential for the avocational collector to collect, might result in quality data collecting information becoming the norm, rather than the rarity. Finally, rare specimens in private collections actually open the door for professionals to help counsel and show the amateur why donations to repositories and paleontology are crucial to paleontological research. Offering professional casts of a rare specimens are ways to serve both the amateur and professional's research.

3. The real conundrum from the survey is the obvious disconnect and confusion that many of the amateur collector have regarding the after-life dispersion of their collection. It is admirable that 70% of the collectors wish to donate to museums, but the hard fact is that many of the collections will not be accepted due to lack of provenance, lack of space in the museum repositories, amount of duplicated material, and a host of other reasons. I do not feel that most amateur collectors truly understand the requirements that donations need to have, before assigning a curation number to a fossil.
4. As a closing comment, all three of the conclusions statements reflect the need for dialogue and further education of the amateur sector of paleontology, and it is felt that the initiative must be led by the professional sector before beneficial changes can occur. Certain initiatives could open the door for awareness and education of the amateur resource, a resource that could benefit the professional paleontologist much more than it currently does. Some examples are listed below:
 - a. Reach out to local organizations and clubs with a speaker list.
 - b. Share a topic list of educational paleontological lectures, so that clubs could contact the university or museum for a particular speaker.
 - c. Invite members to “Visit the museum night” in order to learn what are the major research focal points in the localized area. It would let the amateur know what areas the museum specializes in.
 - d. Educate the collecting public about collections department requirements for donations.
 - e. Use clubs as an outreach resource showcasing collectors and their collections.

News from the Aurora Fossil Museum

Our 500-applications are in!! THANK YOU ALL SO VERY MUCH!
Through this special license plate, the Aurora Fossil Museum will be able to increase our mission!!

Our Executive Director, Cynthia Crane, delivered the initial Meg Plate applications and payment to the NCDOT Special Plate Division in Rocky Mount in mid-July. To view the NCDOT process/next steps, please see our website: <https://aurorafossilmuseum.org/post/48/meg-plate.html>.

Once the meg plates are issued to the pre-applicants, additional meg plates will be available in NCDMV offices throughout the state. They will be available to order online through the NCDMV website in early 2024.

If you didn't sign up for the initial 500, you must wait until they are available through the NCDMV.

If you want to check the status, don't hesitate to contact the Aurora Fossil Museum at meg.plate@aurorafossilmuseum.org.

PLEASE DO NOT CONTACT THE NCDOT AT THIS TIME.

Again, a humongous THANK YOU to Judy Witowski-Argentine for her assistance with our campaign and our pre-applicants for helping us meet our goal to support our mission to educate on North Carolina's fabulous fossil record!

-AFM Team



Photos of the Dino Academy held August 19th at the Museum of Life and Science in Durham
photos provided by Terry Denny and Tony Shaver



2023 Membership Application - North Carolina Fossil Club



Name (1) _____ email _____

(Primary adult member -18 or older for Single/HH Membership)

Name (2) _____ email _____

(Secondary adult member - 18 or older for HH Memberships)

Address _____

City, State, ZIP _____

Phone (____) _____ - _____

First names of minor (<18) children: _____

Current members need to only complete name, any changes and sign the Liability Statement.

Select **One** Type of Membership

(Enclose check or money order

for the indicated amount.)

- | | | |
|--------------------------|----------------------|---------|
| <input type="checkbox"/> | Individual (new) | \$20.00 |
| <input type="checkbox"/> | Individual (renewal) | \$15.00 |
| <input type="checkbox"/> | Household (new) | \$25.00 |
| <input type="checkbox"/> | Household (renewal) | \$20.00 |

Children of NCFC members who are dependent minors (<18) and living at home may accompany parents on any trip *except those with specific age restrictions*.

Memberships are effective from January through December of the year (or portion of the year) of the date of application. For example, persons joining in August will need to renew their membership 5 months later in January.

The Fossil Club's newsletter, JANUS, is published four times a year and is available only online for members. You may read it online or download it from the website

NCFC Liability Statement

The Undersigned hereby acknowledges his/her understanding that fossil collecting is an inherently dangerous activity which can result in serious bodily injury or death, and/or property damage and hereby confirms his/her voluntary assumption of the risk of such injury, death or damage.

The Undersigned, in return for the privilege of attending field trips related to the collection of and/or study of fossils, or any other event or activity conducted or hosted by the North Carolina Fossil Club (NCFC), hereinafter collectively and individually referred to as "NCFC Events", hereby releases the NCFC, NCFC Members of the Board, NCFC Event leaders or organizers and hosts, landowners and mine or quarry operators from any and all liability claims resulting from injury to or death of the undersigned or his/her minor children or damage to his/her property resulting from any cause whatsoever related to participation in NCFC Events.

The Undersigned agrees to comply with any and all rules and restrictions which may be communicated to the undersigned by the NCFC Event leader and/or landowner and mine or quarry operator and acknowledges that failure to comply will result in immediate expulsion from the premises.

The Undersigned acknowledges that this release covers all NCFC Events and will remain in effect at all times unless or until it is revoked by written notice to the current President of the NCFC and receipt of such revocation is acknowledged.

The Undersigned further attests to his/her intent to be legally bound by affixing his/her signature to this release.

Name _____ Signature _____ Date _____

Name _____ Signature _____ Date _____

Privacy Policy: The NCFC collects contact information for purposes of contacting you regarding your membership, collecting trips you may have signed up for and for other members who may wish to contact you. Your contact information is also included on a membership list published on a secure location on the NCFC website and is available to other current NCFC members. If you do not wish for your contact information to be included on the published membership list, please send an email to membership@ncfossilclub.org with "membership list opt out" in the subject line. Please note while you will continue to receive information (electronic and paper) from the club; other members, including trip leaders may not have access to your contact information.

Mail To: North Carolina Fossil Club, P.O. Box 25276, Raleigh, NC 27611

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(Founded 1977)
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NORTH CAROLINA FOSSIL CLUB

CODE OF ETHICS AND CONDUCT

1. Please conduct yourselves in a manner that best represents the NCFC.
2. Please make a sincere effort to keep informed of all laws, regulations and rules regarding collecting on private and public lands.
3. Never use the name of the Club to gain access to lands, or scientific sites actively under study by paleontological professionals for personal gain or profit.
4. Please act responsibly and safely on all club outings so as not to bring other members or yourself into harm or danger. Parents are responsible for their children and making sure their children follow all quarry, etc. rules. Firearms are prohibited from all Club functions.
5. Always respect and cooperate with the field trip leader or designated authorities in collecting areas. Do not bring along anyone not signed up for the trip, or any non-member to a trip without clearing it with the field-trip leader first.
6. Never collect a site immediately prior to a scheduled field trip thereby preventing fair collecting opportunities for the rest of the members of the Club. "Scouting" ahead of time by the field trip leader is fine.
7. You are encouraged to contact the appropriate professionals upon discovery of what you consider to be scientifically significant fossils. This includes excavation, preparation, and documentation of the fossils in question. You are encouraged to consider donating such fossils to appropriate facilities.