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FOSSIL SECTION

The FOSSILETTER

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December 2022

December Meeting

The December section meeting is on Tuesday, December 6th at 7:30 PM. We will meet at the Community Meeting Room at the NEQALS (North East Quadrant Advanced Life Support) building at 1030 Jackson Rd, Webster, 14580. This meeting will not be broadcast on Zoom.

The meeting will feature our traditional "Show-n-Tell" with pizza and drinks being provided by the section. Members are asked to bring their interesting finds and any specimens in need of identification. This is a great opportunity to show off your finds from the past year, or a part of your collection. Don't worry if what you have is not flashy, fossils rarely are. Whatever you have will be interesting to the rest of us. Many specimens which appear, at first glance, to be bland may actually turn out to be something rare or unusual. If (like me) you have nothing to show, come anyway for the joy of being with friends. If you have specimens which are defying identification bring them along. Between us all we usually have enough knowledge to put a name to something. Tables will be set up around the room and you can lay all your interesting specimens out for us to all enjoy and discuss.

At this meeting, we will disperse some of the Sam Ciorca eurypterid collection. Each paid-up member attending the meeting will be allowed to choose a specimen to take with them. Note that we are not giving out priceless specimens! The Yale Peabody Museum got Sam's best stuff a couple years ago and by Sam's will was first on the list to go through Sam's estate and take whatever fossils they wanted. They filled a box truck. Then the Paleontological Research Institution was allowed to sort through what Yale left and they also filled a truck. Then we took the best of what was left. Anything that had provenance or was relatively complete was long gone. What we got was scrappy, but they are eurypterid fossils and would

go nicely into your collection. Here are 4 examples, pulled out at random. As you see, there are prosomasata (heads) sometimes with other parts attached and there are body fossils more or less complete. We will hold a drawing for choice of fossil—first name picked gets first choice—until everyone has gotten one.



If you have small fossils or fossils for which you would like a close-up view of details, bring them. Michael Grenier will again have a station set up with a 5MB digital microscope with 20X-200X magnification. Images of your fossil under magnification can be captured and transferred to your USB memory stick or SDHC card (SanDisk).

Bring a friend, visitors are welcome (but they won't get a eurypterid).

Membership Renewal Time

Unless you are a Life Member, note that your membership will expire on December 31, 2022. Please renew your membership now. A membership form is sent with this, or you can get one or even complete the renewal at rasny.org/mbform.pdf. Remember, on the form, you have to add the Rochester Academy of Science membership (\$10 individual) and Fossil Section membership (\$10 individual or family, \$5 student).

NO January Section Meeting

The Section will not hold a January meeting or issue a newsletter due to the holiday season. The next meeting will be Tuesday, February 7th, 2023 and will feature Gerry Kloc on trilobites. This meeting and March's will be only on Zoom to avoid winter weather.

President's Report by Dan Krisher

On October 29th the Fossil Section set up and staffed an outreach table at the RAS annual Fall Paper Session held at the Rochester Museum and Science Center.

The Fossil Section held its November meeting on 11/8 at the Northeast Quadrant Advanced Life Support building in Fairport. The evening's lecture was given by Dr. Robert Minckley, Professor of Instruction at the University of Rochester. While his principal research revolves around solitary bees, the talk he gave concerned the Ward Project at the University of Rochester. The Ward Project seeks to compile and disseminate information on remaining collections and correspondence and other documents related to Henry Augustus Ward.

Turn Your Shopping into RAS \$\$\$

If you are doing some holiday shopping at Amazon.com, please do it at their Smile Amazon site. If you set up RAS to benefit, Amazon will make a donation of part of the proceeds to the RAS, at no extra cost to you. The gift purchases you make at Amazon will provide the extra gift of helping to support your Academy! To start, simply go to smile.amazon.com and sign up.

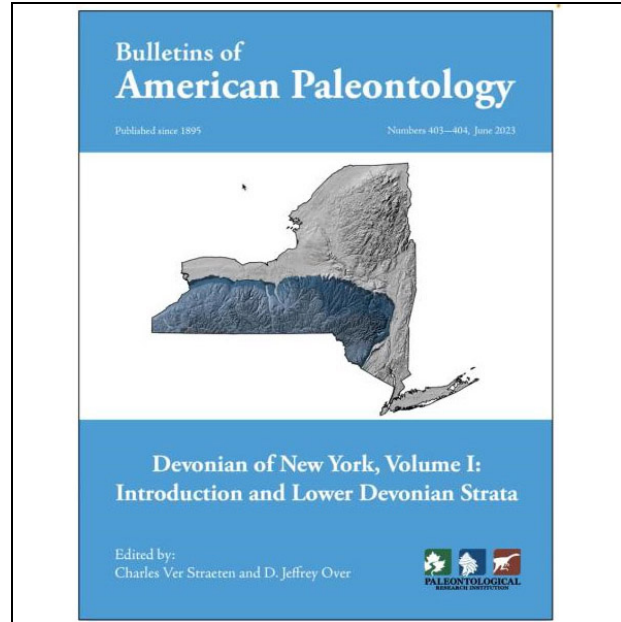
SDS 2023 and IGCP 652 - Annual Meeting

by John Handley & Michael Grenier

For several years now, many of our favorite speakers have been involved in a comprehensive study of Devonian stratigraphy in New York leading to a major revision. This long-awaited treatise is finally nearing publication and is the theme of a major conference this coming summer.

The treatise is *Devonian of New York* edited by Charles Ver Straeten of the NY State Museum and D. Jeffrey Over of SUNY Geneseo. It is expected in June 2023 as three simultaneously published volumes of the *Bulletins of American Paleontology*.

It totals 900-1000 pages and is organized into 12 chapters, each devoted to a particular Devonian time interval (e.g., Hamilton Group) or system (terrestrial rocks).



Consequently, the Subcommittee on Devonian Stratigraphy (SDS) and the International Geological Correlation Programme (IGCP) will have their joint annual meeting at SUNY Geneseo from July 26 to August 7, 2023 with this as their theme. They expect over 200 participants from 36 countries.

The schedule includes a four-day field trip from July 26 (Wed) to July 29 (Saturday) to examine the clastic strata in northeast Ohio and northwestern Pennsylvania, Upper Devonian offshore clastic dominated strata in western New York that contain the Middlesex event, Rhinestreet event, Kellwasser bed equivalents, the Devonian-Carboniferous boundary, and the Frasnian-Famennian boundary. There will be technical sessions and business meetings on July 30 and August 1, with a fieldtrip on July 31. A final field trip on August 2 will study the Silurian-Devonian boundary and Middle Devonian strata in central NY, and finish with a visit to the Paleontological Research Institute in Ithaca.

For more information, see https://www.geneseo.edu/SDS_2023.

More Upcoming Meetings

by John Handley

2023 GSA Sectional meetings are just around the corner! Date in parens is the due date for

Abstracts. South-central: 17–19 March 2023, Reston, VA (6 Dec. 2022)

<https://www.geosociety.org/GSA/Events/SectionMeetings/GSA/Sections/sc/2023mtg/home.aspx>;

Southeastern-Northeastern: 13–14 March 2023, Stillwater, OK (13 Dec. 2022)

<https://www.geosociety.org/GSA/Events/SectionMeetings/GSA/Sections/se/2023mtg/home.aspx>

North-central: 4–5 May 2023, Grand Rapids, MI (7 Feb. 2023)

<https://www.geosociety.org/GSA/Events/SectionMeetings/GSA/Sections/nc/2023mtg/home.aspx>

Cordilleran: 17–19 May 2023, Reno, NV (14 Feb. 2023)

<https://www.geosociety.org/GSA/Events/SectionMeetings/GSA/Sections/cd/2023mtg/home.aspx>

Rocky Mountain: 23–25 May 2023, Fort Collins, CO (28 Feb. 2023)

<https://www.geosociety.org/GSA/Events/SectionMeetings/GSA/Sections/rm/2023mtg/home.aspx>

The 2023 GSA Connects meeting will be in Pittsburgh October 15 – 18.

<https://community.geosociety.org/gsa2023/home>

The Paleontological Society holds its Annual Meeting at the same time in Pittsburgh in conjunction with the Annual Meeting of the GSA. Additionally, the 12th North American Paleontological Convention will meet from June 17-21, 2024 at the University of Michigan, Ann Arbor, MI.



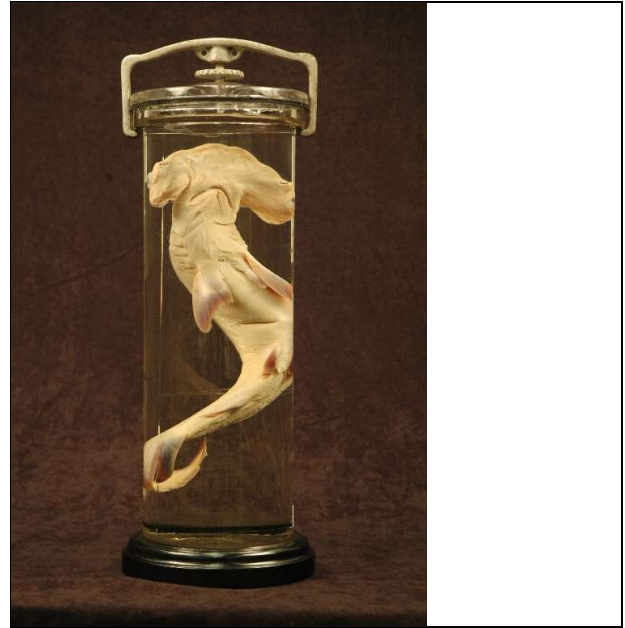
November Meeting Recap

by Michael Grenier

We had a great meeting in November with Dr. Bob Minckley. If you missed the talk, you can find it on our private YouTube website at <https://youtu.be/5Ewsi-k1wEk>. This is edited so most of the issues we had are removed. The sound quality is a bit off though adequate. I am sorry we had so many technical issues with the talk. I discovered the cause afterwards—the blame lies with Microsoft, whose automated procedures were attempting to seize control of my laptop to

make updates while we were trying to use it to run the Zoom session and record the talk. That is why it kept dropping the mike, changing the video source, and causing so many interruptions. We will watch for this in the future.

Bob greatly expanded on the biography of Henry Augustus Ward published here last month with much detail on the life of this fascinating man. He then showed several examples of Ward's museum collections available through his catalogue. Many are virtual works of art.



The above baby hammerhead shark is in the typical hand-blown glass bottle fitted with a near-airtight glass cap with a wire to hold the specimen upright in the bottle. The mounting of other specimens included beautifully made wood and glass cases, wooden stands and carefully wrought armatures to mount skeletons.



Others, like this glass model of an *Anthea cereus* snakelocks sea anemone crafted in Germany are literally works of art.

When the University of Rochester realized what a treasure it had in the remnants of its original collection, it budgeted money for the preservation and restoration of its specimens. Bob and his team changed the cloudy and reduced formaldehyde fluids in the glassed biological specimens, restored the taxidermy pieces and did whatever was necessary to preserve this vital collection. The UofR rare books library was found to have a huge amount of Ward's catalogues, books, correspondence, and other material.

Bob showed examples of Ward's catalogues. A readable example can be found at:

<https://www.biodiversitylibrary.org/item/212981#page/5/mode/1up>

Fossil News edited by Michael Grenier

Geobiologists shine light on Earth's first known mass extinction event 550 million years ago

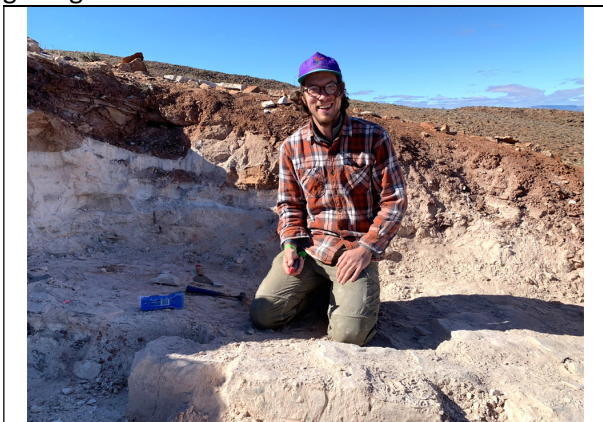
Virginia Tech Press release issued: 7 November 2022. <https://vtx.vt.edu/articles/2022/11/science-Ediacaran-first-mass-extinction-event-scott-evans.html>.

Doubtless, you know that there are five known mass extinctions that stand out in the history of animals. These are the End-Ordovician (440 million years ago), the late Devonian (370 MYA), the End-Permian (250 MYA), the Triassic-Jurassic Extinction (200 MYA), and the End-Cretaceous Extinction (65 MYA). A new study by Virginia



Impressions of the Ediacaran fossils Dickinsonia (at center) with the smaller anchor shaped Parvancorina (left) in sandstone of the Ediacara Member from the Nilpena Ediacara National Park in South Australia. Photo courtesy of Scott Evans.

Tech geobiologists led by Scott Evans has identified a likely sixth, late in the Ediacaran, just before the Cambrian. They have traced the cause of the first known mass extinction of animals to decreased global oxygen availability, leading to the loss of about 80% of animals present near the end of the Ediacaran Period some 550 million years ago. "This included the loss of many different types of animals, however those whose body plans and behaviors indicate that they relied on significant amounts of oxygen seem to have been hit particularly hard," Evans said. "This suggests that the extinction event was environmentally controlled, as are all other mass extinctions in the geologic record."



Scott Evans at a 2021 dig for Ediacaran fossils at the Nilpena Ediacara National Park in South Australia. Photo by Emmy Hughes.

What exactly caused the drop in global oxygen? That's still up for debate. This paper (Evans, Scott D., et al. "Environmental drivers of the first major animal extinction across the Ediacaran White Sea-Nama transition." *Proceedings of the National Academy of Sciences* 119.46 (2022): e2207475119.), is available for download at: <https://vtechworks.lib.vt.edu/handle/10919/112639>.

Rediscovered casts bring back historic ichthyosaur fossil destroyed in war (RAS Member published)

Submitted by David Bishop. Natural History Museum Press Release issued November 2, 2022. <https://royalsocietypublishing.org/doi/epdf/10.1098/rsos.220966>.

The first complete ichthyosaur skeleton has resurfaced; despite being thought destroyed during World War Two. This fossil, collected by pioneering paleontologist Mary Anning, was

subsequently placed in the collection of the Royal College of Surgeons. It remained there for over a century until, in the closing days of the London Blitz, the college was struck by bombs and the specimen destroyed.

A new paper reveals that not all was lost. It documents two previously unknown casts of the specimen found to exist in the USA and Germany. These important fossil casts reveal previously unknown details of the ancient marine reptile. Dr. Dean Lomax and co-author and RAS member Professor **Judy Massare** were conducting research in the Yale Peabody Museum in Connecticut, USA, in 2016 when they came across a specimen believed to be a real ichthyosaur fossil. However, the scientists recognized it not as a real fossil but as a cast of the original specimen which had been painted to look like a fossil. Three years later, Dean would discover another cast in the collections of the Museum für Naturkunde in Berlin, Germany, whose origins were also unappreciated.



Left, the Yale Peabody cast. Right, the Museum für Naturkunde cast. Image courtesy Dr. Dean Lomax

Decades before dinosaurs were formally described, fossils of ancient marine reptiles known as ichthyosaurs were already capturing the public's imagination. After her brother Joseph found a 1.2 meter (4 foot) long skull in 1811, Mary Anning (age 12) searched and found the skeleton a few months later. Their mother, Molly Anning, sold the combined piece to squire Henry Henley for £23. Henley lent the fossil to William Bullock for public display at the London Museum of Natural History where it created a sensation. It was formally described by Sir Everard Home in 1814. The skull is now in the Natural History Museum; the skeleton is lost.

Lomax says, 'Before the fame of the dinosaurs, ichthyosaurs were 'the' famous prehistoric reptiles. Their big skulls, eyes and teeth captured the public's imagination, making the ichthyosaurs icons of evolution. This, and other early ichthyosaur finds, sparked a major interest in collecting more of these curious, enigmatic creatures, and played an important role in establishing paleontology as a scientific discipline.'

The Peabody cast found by Lomax and Massare is of a somewhat later Mary Anning ichthyosaur specimen find sold to Lt-Col. Thomas James Birch, with the Peabody cast potentially being made shortly after. It was described by Home as *Proteosaurus* in 1819 without credit to Anning, but is now identified as *Ichthyosaurus*.

The Peabody cast is believed to be the older of the pair and is less detailed and more worn than the one in Berlin. While both differ from the original illustration, the Berlin specimen is thought to have benefitted from more advanced casting techniques that preserve the original fossil in better detail. The two casts were the only ones rediscovered by the authors after visiting around 60 institutions.

This paper (Lomax, Dean R., and Judy A. Massare. "Rediscovery of two casts of the historically important '*Proteo-saurus*', the first complete ichthyosaur skeleton." *Royal Society Open Science* 9.11 (2022): 220966.), is available for download at:

<https://royalsocietypublishing.org/doi/full/10.1098/rsos.220966>

CALENDAR OF EVENTS

December

Tuesday December 6, FOSSIL MEETING 7:30 PM NEQALS Community Meeting Room, 1030 Jackson Rd, Webster, 14580. Our traditional Show-and-Tell with pizza and drinks provided by the section. This is a great opportunity to show off your finds from the past year. Visitors welcome.

February

Tuesday February 7, FOSSIL MEETING 7:30 PM. LOCATION: On ZOOM only. Speaker is Gerry Kloc on trilobites.

Visitors are welcome to all Fossil Section meetings! For more information and the latest updates check the RAS Website (www.RASNY.org). You can also contact Dan Krisher at DLKFossil@gmail.com or John Handley at jhandley@rochester.rr.com for further information.

ROCHESTER ACADEMY OF SCIENCE FOSSIL SECTION

Monthly meetings are now held as hybrid meetings, live but also broadcast on Zoom. Meetings are held the first Tuesday of each month from October to December and from February to May at 7:30 pm. In person meetings, when they can be held again, are at the Brighton Town Hall, Community Meeting Room, 2300 Elmwood Avenue, Rochester, NY unless otherwise listed.

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The FossilLetter is published before each meeting month of the year. Please send submissions to mgrenier@frontiernet.net or by U.S. Postal Service mail to 692 Maple Drive, Webster, NY 14580. Deadline for submissions to the FossilLetter is the 15th of the month.

For scheduling changes and the latest updates please check the RAS Website (www.rasny.org) and click on the Fossil Section link. Last minute updates can also be found on the *General Announcements* page of the Academy Website.



PALAEOONTOLOGY.

We have on hand at the present moment a large and unusually rich store of fine, perfect FOSSILS. We use great care to keep our stock free from all but perfect, distinct, well-preserved specimens. From these we offer—at the option of the purchaser—either INDIVIDUAL SPECIMENS or we will make up, for any given sum, COLLECTIONS representing either a particular age or ALL GEOLOGICAL EPOCHS. The richness and extent of our material give us unprecedented facilities for doing this.

Fossil announcement. Ward's Natural Science Bulletin, Vol. 1, No. 2, January 1, 1882.