



# DMS First Annual Geology Symposium 2017

**Arsht Hall, University of Delaware  
2700 Pennsylvania Avenue  
Wilmington, DE 19806**

**Saturday, March 4, 2017, 11AM - 4 PM  
Sunday, March 5, 2017, 11AM - 4 PM  
(Seating is limited to 40-60 per room.)**



**Dr. David Wunsch, Delaware Geological Survey State Geologist  
Sunday, March 5th Room 224 10:15 AM - 11:15 AM**

## 'Gold and Platinum Group Metals Mines of the World'

Some old-time prospectors say that gold can be found in any stream, creek, or river. In the 21st century, however, miners and mining companies rely upon the college-educated geologist as their 'prospector'. Working with mining engineers, and experienced miners, today's seekers of economic quantities of precious metals use stratigraphy, geophysics, and other high-tech equipment and techniques that succeed.

Modern mining works best on a grand-scale. Most of the gold and platinum group metal mines are of this ilk. Dr. Wunsch will take us on a virtual tour of these multi-national, global concerns. So, hold on to your helicopter seats for a trip around the world.



**Dr. Tim Folkomer, Retired Earth-Science Teacher  
Saturday, March 4th Room 219 11:00 AM - 12:00 PM**

## 'Dinosaur National Monument'

Dinosaur National Monument is a vast stretch of federally-protected land which straddles two states: Colorado and Utah. Visiting this site almost amounts to a pilgrimage to fossil enthusiasts and paleontologists, alike. With over 800 paleontological study sites, this Jurassic 'park' hosts the remains of a variety of 150 myo sauropods. Join "Doc" Folkomer for a fun tour of this historic landmark. See photos and likely specimens of ancient beasts which roamed the now arid landscape. On October 4, 2017, the Monument will celebrate its 102nd birthday.



**Steve Lindberg, Professor of Geology, University of Pittsburgh  
Saturday, March 4th Room 225 12:15 PM - 1:15 PM**

## 'How to Build a Dinosaur, Fabricating Fossil Replicas'

In 1990, the discovery of the Tyrannosaurus rex "Sue" sparked a renewed interest in dinosaurs and the acquisition of vertebrate fossils for both public and private collections. It also revealed the darker side of the dinosaur fossil market and the potential legal issues associated with collecting vertebrate fossils. As a result, the growth of small companies producing museum quality replicas has filled a growing niche to supply a wide variety of fossil reproductions to a growing market. Steve Lindberg will demonstrate the process involved in creating accurate fossil reproductions and will have an impressive display of completed reproductions to exhibit the finished products. Steve's presentation will also include a discussion of the current legal and ethical issues involved in the dinosaur fossil trade.



**Cathy Young, Proprietor, Mid-Atlantic Fossil and Nature Adventures  
Saturday, March 4th Room 224 1:20 PM - 2:05 PM**

## 'Fossil Collecting by Boat on the Eastern Seaboard'

Located in nearby West Chester, Pennsylvania, Cathy Young runs Mid-Atlantic Fossil and Nature Adventures, a fun and educational fieldtrip service. Her passion for learning teams up experts with those curious to learn in the outdoors to see and sometimes collect minerals, fossils, and other natural specimens. What can be more exciting than accessing a fossil-collecting site by water?! As the eastern United States Atlantic Coastal Plain is chock full of the amazing remains of sea creatures long-gone, our shores are ripe for collecting. With a guided expedition, one can gain a fuller experience, as well as a productive outing.



**Dave Bohaska, Smithsonian Institution, Collections Management, Vertebrate Paleontology  
Saturday, March 4th Room 225 2:15 PM - 3:00 PM**

## 'Fossil Collecting at Calvert Cliffs'

Along the Chesapeake Bay's Calvert Cliffs area lies a stretch of marine-fossil-laden beach, which is best visited at low-tide. Collectors can find well-preserved examples of scallops, Turitella, and shark's teeth, that have weathered from the clay/silt strata above. Three geologic formations from the Miocene (6-20 mya) host countless specimens to collect, study, and enjoy for generations to come. Join us for a special presentation on fossils that you can collect from the accessible public areas of the bay.



**Dr. Ian Saginor, Forensic Geologist, Federal Bureau of Investigation (FBI), formerly of Keystone College** Saturday, March 4th Room 224 3:15 PM -4:00PM

**'Evidence from the Earth: Forensic Geology at the FBI'**

When soil or other geologic material is found on evidence from crimes, FBI forensic geologists can be called on to analyze it. Working out of the FBI Laboratory in Quantico, VA, they analyze evidence using techniques ranging from simple microscopy to X-ray diffraction. Forensic geology includes the study of soil, minerals, gemstones in addition to man-made materials such as glass, concrete, and safe insulation. Learn about some forensic geology techniques and the process of analyzing evidence from the Earth. If you're into 'forensics', then Dr. Saginor's talk is for you!



**Karenne Snow, Naturalist and author**  
Sunday, March 5th Room 224 11:00 AM - 12:00 PM

**'Type Localities for Minerals'**

Simply put, a 'type locality' is the site from which a mineral was first identified. The discovery and naming of 4,500+ valid species makes for a great number of stories. A nearby example would be 'Eastonite' from Easton, Pennsylvania. And fortunately, we can still collect specimens from the C. K. Williams Quarry on the Delaware River. Karenne mentions this locality in her book 'Gem Trails of Pennsylvania and New Jersey'. As a naturalist, teacher, and geologist, Karenne pools from decades of experience to share about such places in her 2017 Symposium presentation.



**Dr. Tim Folkomer, Retired Earth-Science Teacher**  
Sunday, March 5th Room 219 12:10 PM - 3:00 PM

**'Mineral and Fossil Identification Open Session'**

**'Doc' Folkomer will conduct a fossil and mineral identification session for all students and enthusiasts.**



**Dr. Stanley A. Mertzman, Professor of Geology, Franklin & Marshall University**  
Sunday, March 5th Room 225 1:10 PM - 2:00 PM

**'How Earth Works: Focusing on Volcanoes and Earthquakes'**

Earth is a dynamic planet. Its surface is characterized by approximately a dozen large slabs of rock known as lithospheric plates, each 10 to 200 kilometers thick, that move primarily in a horizontal manner. These plates interact with bordering slabs of rock in three distinct ways, setting the stage for both earthquakes and volcanoes. A pictorial guide through the surface features produced along these three types of plate boundaries will be provided along with a lively narrative.



**Sandy Schenck, Geologist, Delaware Geological Survey**  
Sunday, March 5th Room 225 3:00 PM - 3:40 PM

**'What's Under the Coastal Plain and How That Might Change the look of the Delaware Piedmont Bedrock Map'**

Professional Geologist Sandy Schenck has worked to add value to our Delaware Geological Survey for many years now. Expert in Piedmont Province geology, Sandy tells our ancient story with modern flair. Scientific enough a discussion for scientists, yet basic enough for school students, who have recently studied earth science, this presentation is sure to please.

With up-to-the-minute research, Sandy and his colleagues are rewriting the geologic map, so that we may better understand what is under our feet in the Diamond State. So, please do join us for a talk that is both informative and fun!

**\*\*\*Show Admission Fee includes Symposium.**

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