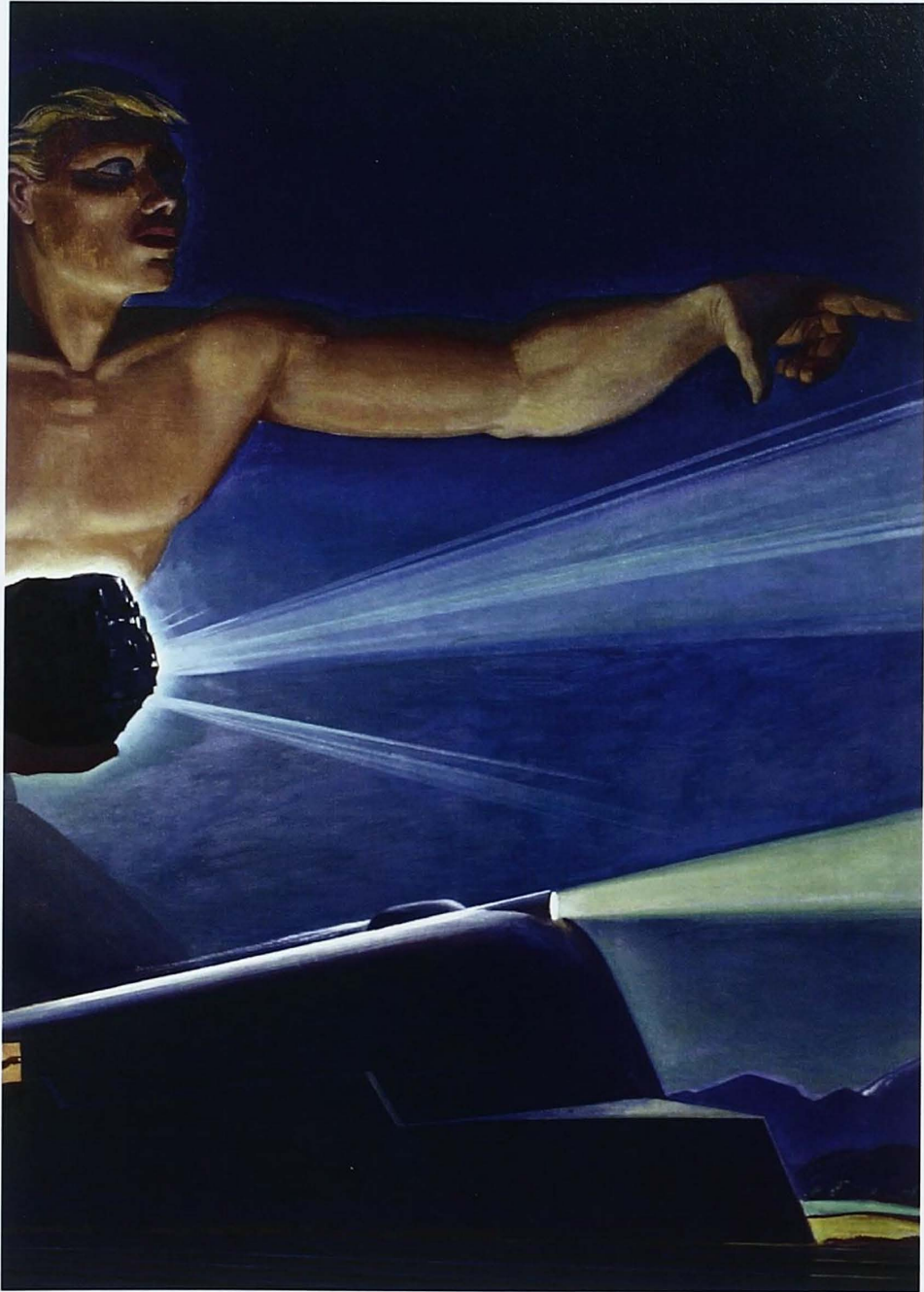


EMS MUSEUM & ART GALLERY ANNUAL REPORT

FOR THE ACADEMIC YEARS 2008–2009 & 2009–2010



COLLEGE OF

EARTH AND MINERAL SCIENCES

MISSION STATEMENT

The mission of the Earth and Mineral Sciences Museum & Art Gallery is to preserve the collections of the College of Earth and Mineral Sciences, to enhance the quality of life for the students and staff of The Pennsylvania State University and the community in central Pennsylvania by serving as a resource for informal science and art education, to foster a sense of curiosity about the natural and cultural world around us, and to instill responsibility in all people to make our world a better place.

DEAN

William E. Easterling

MUSEUM ADVISORY BOARD

Jonathan Mathews, Chair

Hu Barnes

Angela Breeden

Joe Branuschak

Maureen Feinerman

Paul Howell (2008-2009)

Cathy Lyons

Paul Markowski

Sean M. Miller

George Milner

Lee Ann Nolan (2009-2010)

John Passaneau

Ron Redwing (2009-2010)

Howard Steidle, Jr.

Bill Welch (2008-2009)

FROM THE DIRECTOR



The EMS Museum & Art Gallery has realized some major accomplishments during the last two academic years. The highlight of 2008–2009 was the publication of *Wonders of Work and Labor: The Steidle Collection of American Industrial Art*, a heavily illustrated, scholarly book focusing on the museum's Steidle Art Collection. To celebrate and launch this publication, the EMS Museum & Art Gallery in collaboration with the Centre County Historical Society hosted a symposium, "Labor's Legacy: Pennsylvania Industrial Art." In addition, a special exhibition of select paintings from the collection was developed. The exhibition officially opened during the post-symposium reception at the museum.

In 2009–2010, the museum received grants from the Institute of Museum and Library Services (IMLS) and American Association of Museums (AAM) for conservation (CAP) and management (MAP) surveys of the museum, respectively. These important surveys and the resulting reports will help the museum evaluate its needs to move towards professional accreditation by the AAM.

The exhibit "Charles Darwin: A Man of Enlarged Curiosity" was part of a world-wide commemoration of the 200th anniversary of Charles Darwin's birth and the 150th anniversary of the publication of *On the Origin of Species*. An overview and announcement of the EMS exhibition and opening event were included on the *Darwin Online* international Web site <<http://darwin-online.org.uk>>. As it turns out, Abraham Lincoln was born on the same day and in the same year as Darwin. To recognize this special date (12 February 1809), the museum hosted a "birthday party" for both men with a cake for each. Russ Graham gave a short presentation comparing and contrasting the histories of these two monumental people. Of course, official renditions of "Happy Birthday to You," were sung for each of them. The event was attended by faculty, staff, and students.

The EMS Museum hosted a scientific meeting for the American Quaternary Association (AMQUA) at the Penn State. The museum received a \$10,000 grant from PSU for this meeting. AMQUA is a society of interdisciplinary scientists who study different aspects of the last Ice Age. More than 130 scientists from the United States and at least three foreign countries participated in the meeting.

The EMS Museum & Art Gallery also participated in a NASA Teacher Workshop on Extinction. The participants worked with the museum staff to design an exhibit on extinctions. The exhibit will be installed late in 2010. In a similar activity, the museum worked with the Astrobiology Program at PSU and the Pennsylvania Space Grant Consortium to bring a travelling exhibit, "Beyond the Edge of the Sea," and related public programs and teachers' workshops to the museum. This exhibit of water color paintings depicts marine animals and landscapes from the deep aphotic zone of the ocean. Museum staff created a second and complimentary exhibit, "Life in the Dark," that focuses on four research programs in Astrobiology at Penn State.

Programming for schools and other groups continues to expand. The EMS Museum & Art Gallery hosts visits from school groups as well as takes presentations out to the schools. Many of these programs take place outside of the museum and focus on Russ's expertise in geology (paleontology, minerals, rocks, earth structure and plate tectonics). We hope to train graduate students to make these presentations so that more schools can be visited and a greater variety of programs presented. Programs held in the museum are hampered by the lack of convenient parking for participants.

On a sad note, Bill Welch, Mayor of State College and a founding member of the Advisory Board for the EMS Museum & Art Gallery, passed away in the fall of 2009. Bill will be missed by many but especially by the EMS Museum staff and Advisory Board.

Russell W. Graham, Director



Rock and mineral collection at the EMS Museum Center for Education, Research, and Collections (CERC) (top)

Drawer of rock and mineral specimens with inventory sheet during unpacking at CERC (bottom)

COLLECTIONS

Work on collections focused on completing the move from the Steidle building to the new Collections, Education and Research Center (CERC) at the Special Services Building on Standing Stone Lane. Facilities at CERC include a large collection range with dedicated environmental controls. Art and mineral collections are housed in this space but the space is now full. One room of mineral and rock collections remains in the basement of the Deike Building on campus. These collections cannot be moved until more room is allocated at the CERC or compactor units are installed in the collection range. A second, larger room with standard heating and cooling contains fossil, historical, and modern osteology collections. This room has a limited workspace for organizing and preparing collections. There is a large, secure storeroom outside of both of these rooms for equipment and collection supplies (boxes, trays, bubble wrap, ethafoam, etc.). Both Russ and Julianne have offices at the CERC. Julianne's office contains limited space for exhibit preparation. Old exhibit cases have been placed in the hallways and are used for storage of materials including tools, old exhibit props and some supplies. The cases are locked but the space is not secure.

A student employee spent most of the spring semester (2009) unpacking mineral specimens. He inventoried these specimens against packing lists that were prepared before the move. He also prepared condition reports for some specimens. He was able to unpack about one-third of the mineral collection. Most of the art collection is still wrapped and packed. New racks were purchased for some of the art collection but it will be next year before we can install them. At that time we will be able to unpack and unwrap part of the art collection.

Meteorite specimens were loaned to Dr. Paul Howell for research by him and his students. Specimens have also been provided to students for their projects and educational programs. There were several tours of CERC for classes in museology and paleontology, the county historical society, and the university museums group. The collections are also used by various faculty members in their classes or programs.

In 2010, the Steidle family created a special endowment for the care and maintenance of the Steidle Art Collection. Funds for this endowment have been used to clean and repair three paintings that will be featured in an exhibit of selected paintings from the Steidle collection at the Grohmann Museum of the Milwaukee School of Engineering. The endowment will facilitate the long-term care of the collection.

As part of a grant from the Institute of Museum and Library Services (IMLS) for the Collections Assessment Program (CAP), a private conservator, Barbara Moore (Rochester, NY), conducted a general survey of the collections in storage and on display. Her report will be used to improve facilities and conditions for the EMS Museum & Art Gallery. This report will also serve as the foundation for grant proposals to IMLS and other funding sources to obtain equipment and supplies for storage of the art collection.

RECENT ACQUISITIONS

A. H. GORSON PAINTING

Cathleen McFarlane Ross and Walter Ross donated the painting *Mill Scene at Dusk* by Aaron Harry Gorson (1872-1933) to the College of Earth and Mineral Sciences Museum & Art Gallery. Previously, Cathleen created two endowments to honor her late husband, Norris (Mac) McFarlane who graduated with a degree in Metallurgy from Penn State in 1934. Walter Ross and Cathleen, married in 2000, have won many awards for their philanthropy. Cathleen passed away in February of 2010.

Aaron Harry Gorson maintained a studio in Pittsburgh and was widely known for his paintings of steel mills, landscapes,



Aaron Harry Gorson (1872-1933)
Mill Scene at Dusk, n.d.
EMS Museum & Art Gallery Steidle Collection

and cityscapes. During his tenure as Dean of Mining Industries (now EMS), Edward Steidle collected several Gorson paintings of the steel industry. The McFarlane-Ross donation is the eighth Gorson in the Steidle Collection.

EXHIBIT CASES

The museum, with a donation of funds from Hu and Mary Barnes, purchased four custom-built exhibit cases for use in the Art and Mineral Gallery. To date, objects exhibited in these cases have included some of our collection's best mineral specimens as well as objects and specimens included in the exhibition *Life in the Dark*. The exhibit cases were specially designed for the EMS Museum & Art Gallery and incorporate display drawers below the vitrine. These drawers will contain educational materials and specimens illustrating the Dana System of mineral classification. We hope to purchase eight more of these cases in the future.



Display of mineral specimens in the new exhibit cases in the Art and Mineral Gallery.

EXHIBITS

MINERALS

The number of minerals on exhibit has been increasing over the last two years. Julianne prepared a case of blue and white minerals in recognition of Penn State's colors. This case supplements the quartz and diversity exhibit that is in the Science Gallery. Large, showy specimens of minerals from the museum's collection have been on display in the new cases in the Art and Mineral Gallery as well as on pedestals in the Science Gallery. The Nittany Mineralogical Society exhibit case of oolites was moved from the Art and Mineral gallery to the Science Gallery. The onlite exhibit was followed by pegmatites and then a selection of minerals from Mexico from the collection of Sandra and Mike Sheasley.



Julianne Snider preparing Blue/White mineral exhibit.

GEOGRAPHIES OF CLIMATE CHANGE

An exhibition highlighting research conducted by Department of Geography faculty emphasized human responses to climate change. Specimens, artifacts, objects, and graphics filled three cases and two kiosks in the Science Gallery. The components of the exhibit looked at life style alterations confronting populations locally (at Penn State) as well as coastal Floridians, indigenous peoples living around the Arctic Circle, and farmers in Ghana, Africa. The exhibits were developed by museum staff with contributions by Brent Yarnal and Petra Tschakert (Department of Geography), Audrey Maretzki (College of Agricultural Sciences), Department of Food Sciences), and John Simmons (Adjunct Curator of Collections).



Geographies of Climate Change graphic panel and Arctic Region exhibit case

JOHN ELBRIDGE PASSANEAU: MINERAL COLLECTOR / PHOTOGRAPHER

A collection of spectacular photographs of minerals made by John Passaneau, research equipment designer in Eberly College of Science, was put on display in 10 box frames lining the hall between the museum's galleries. Passaneau has collected minerals around the world, beginning when he was 10 years old. Although he has broad interests in minerals and mineralogy, Passaneau's specialty is micro-mounting specimens to view under magnification.

The images in this exhibition were created with a digital image processing technique known as focus stacking. By meticulously combining several images with different focal points Passaneau produces a single image with an extensive depth of field. Each image in the exhibition is made from three to seventeen individual photographs. The mineral specimens were photographed in their natural forms, not enhanced or altered by cutting or polishing.



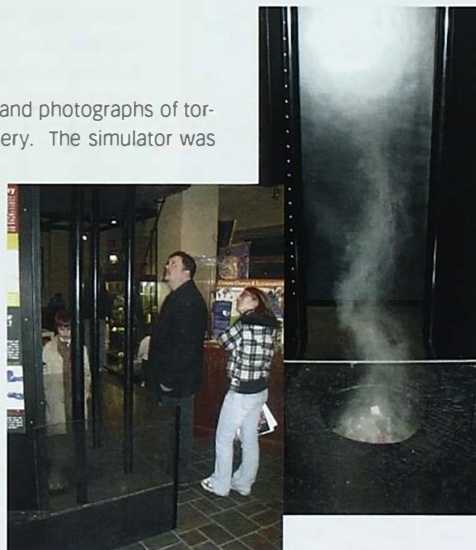
Museum visitor posing with Lincoln portrait (on a \$5 bill) at the Darwin exhibit during birthday celebrations.

CHARLES DARWIN: A MAN OF ENLARGED CURIOSITY

Julianne Snider and John Simmons (Adjunct Curator of Collections), developed an exhibit of publications, objects, and specimens representing Darwin's work and life. The exhibit highlighted his voyage on the HMS Beagle as a young man, focused on his seminal theory of evolution by natural selection, and documented his extensive and varied research interests and publications created throughout his life. Launched as part of the "Darwin 2009" commemorations of the 150th anniversary of *On the Origin of Species* (24 November 1859) and the 200th anniversary of Darwin's birth (12 February 1809), the exhibit occupied two cases and a banner hung from the ceiling. It has been a popular exhibit in the museum.

TORNADO SIMULATOR

A Tornado Simulator with explanatory graphics panels and photographs of tornadoic weather events was installed in the Science Gallery. The simulator was designed and built by the EMS shop in consultation with Dr. Paul Markowski (Department of Meteorology). The EMS simulator differs from most commercially available models in that it has rheostats to change the horizontal and vertical air currents, which allows museum visitors to observe their effects on the funnel cloud. The tornado exhibit is the third major interactive exhibit in the museum (the two others are the seismology exhibit and the GeoWall). The Tornado Simulator was funded, in part, by a National Science Foundation (NSF) grant to Dr. Markowski.



Visitors create a tornado in the simulator by changing the speed of the air currents.

DO YOU MEASURE UP?

The display of dinosaur bones, eggs, and trackways in the Science Gallery was enhanced with a graphical life-size representation of *Diplodocus* leg bones and a height scale so visitors could compare how tall they are versus the giant extinct creature. The graphic includes information about the life of *Diplodocus* as well as the Geologic Time Spiral created for the U.S. Geological Survey (USGS) showing the history of Earth from its formation to present. The exhibit was further supplemented with a small, historic, plaster cast of the dinosaur from the museum's collection.



A young visitor contemplates the size of a dinosaur track.

WONDERS OF WORK AND LABOR

The primary exhibit in the Art and Mineral Gallery for 2008–2009, "Wonders of Work and Labor" highlighted the gems of the Steidle Collection of American Industrial Art. This exhibit was curated by Julianne Snider, Assistant Director of the EMS Museum & Art Gallery. Paintings were selected to show the various themes (transportation, mineral industries, workers, townscapes, and factories) collected by Dean Edward Steidle. In addition, a portrait of Dean Steidle and a case of artifacts showing various aspects of his life were included in the exhibition. A small case of mining lamps accompanied a life-size portrait of a miner.



BEYOND THE EDGE OF THE SEA: DIVERSITY OF LIFE IN THE DEEP-OCEAN WILDERNESS

Beyond the Edge of the Sea is an exhibit of water color paintings featuring life and scenes from the deep-sea vents and ocean floor. These ecosystems were discovered in 1977 by geologists exploring the spreading ridges (places where new ocean crust is created) of the deep-sea basins. These environments are in complete darkness so photosynthesis is not the primary support for life. Instead, bacteria and other microbes that synthesize energy from chemicals (chemosynthesis) are the primary producers.

The exhibit is the result of the interaction between a biologist, Dr. Cindy Lee Van Dover of Duke University, and an artist, Karen Jacobsen. Both of them dove to depths greater than a mile below the ocean's surface in a small submersible known as Alvin. Dr. Van Dover made observations on the life forms and collected some of them for analysis. Karen Jacobsen

sketched and painted the organisms and the environments in which they lived. The exhibit was developed by the Muscarelle Museum of Art at the College of William and Mary. It was exhibited in EMS from February to September 2010.

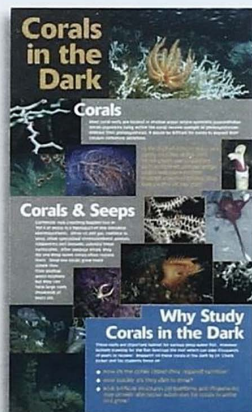
The Astrobiology Program at The Pennsylvania State University (PSU) hosted a series of programs that featured the exhibit. One program was a teacher's workshop that involved both the scientist (Cindy Lee Van Dover), and the artist (Karen Jacobsen). Both made public presentations and then gave special attention to teachers who

Artist Karen Jacobson (left) and researcher Dr. Cindy Lee van Dover with Jacobson's life-size water color painting of giant tube worms on display in the Art and Mineral Gallery
Announcement for of the opening event of the two exhibitions.

registered for the workshop. Additional programs were held for school children and the general public. In addition, the exhibit was open to the public during the State College Artfest event. An information booklet and coloring sheets were available at all times in the gallery. It was an extremely successful exhibit.

Funding to bring the exhibit to EMS was provided by NASA through a grant obtained by Heather Nelson and Dr. Christopher House of the Pennsylvania Space Grant Consortium and PSU Astrobiology Program, respectively.

LIFE IN THE DARK



This special exhibit was designed and installed by the EMS Museum & Art Gallery staff. It focused on five research projects that are part of the Astrobiology Program at PSU and was complimentary to *Beyond the Edge of the Sea*. The exhibit consisted of kiosks with panels for each of the projects and specimens from the deep sea and below the Greenland ice sheet. A portion of the exhibit concentrated on Dr. Chuck Fisher's survey of a ridge ecosystem in the Lau Basin of the South Pacific. Dr. Fisher's laboratory provided a giant isopod, a crab, and snails that were collected on their expeditions as well as a portion of a "black smoker" vent.

Dr. Fisher's laboratory also provided deep-sea corals from the Gulf of Mexico. Most corals must live within the lighted, or photic, zone of the ocean because deposition of their skeletons is facilitated by a symbiotic relationship between photosynthetic algae, zooxanthellae, and the corals. In the deep sea, this symbiotic relationship is filled by che-

mosynthetic microbes. Chemosynthetic systems are of great concern because of the recent oil spill in the Gulf of Mexico as they take thousands of years to develop.

Bacteria extracted from near the bottom of the Greenland Ice Sheet formed the basis for another exhibit. Research on this system is being conducted by Dr. Jean Brencchley, Professor of Biochemistry and Molecular Biology at PSU. These bacteria subsist on organic materials deposited in the glacier as it formed. They grow and reproduce very slowly. Cultured specimens of some of these bacteria were included in the exhibit. Bacteria also live at great depths buried in deep-sea sediments miles below the surface of the ocean in the aphotic zone and receive their sustenance from organic material in the sediment. Study of these types of organisms, known as extremeophiles because of their extreme environments, may help us understand the origin of life on earth as well as aging processes.

Another exhibit was on organisms that live in caves with acidic environments. The laboratory of Dr. Jennifer (Jenn) Macalady, Assistant Professor of Geosciences, is doing this research. The cave environment has no light and is dependent upon chemosynthetic microbes. In addition, larger organisms live in pools of water with an acidic pH deep in the cave. They are also extremophiles.

This exhibit provided an opportunity for the EMS Museum & Art Gallery to collaborate with faculty, students and staff outside of EMS. It demonstrates the interdisciplinary nature of research in astrobiology.



Astrobiology research at Penn State featured in Life in the Dark exhibition—corals from extreme environments and bacterial colonies collected in ice core samples taken from the bottom of Greenland's ice sheet.

PROGRAMS

LABOR'S LEGACY: PENNSYLVANIA INDUSTRIAL ART



Dr. Betsy Fahiman speaking at the American Philatelic Center in Bellefonte.

The EMS Museum & Art Gallery combined efforts with the Centre County Historical Society to present a symposium, *Labor's Legacy: Pennsylvania Industrial Art*, on the Steidle Collection and the broader topic of industrial art and the history of industry in Pennsylvania. The symposium was featured in the "Weekender," a special section of the *Centre Daily Times*. Dr. Betsy Fahiman gave the keynote address on industrial art. Other speakers talked about specific art collections or historical periods of Pennsylvania industry. More than 65 people attended the symposium. The symposium was held on May 5, 2009 at the American Philatelic Center in the historic Match Factory in Bellefonte, Pennsylvania—a suitable venue given the topic of the symposium. The event was attended by a large contingent of the Steidle family, whose participation made it an especially meaningful occasion.

Among the distinguished speakers participating in the symposium were: Dr. Betsy Fahiman from Arizona State University; Dr. Eric Schruers, independent scholar from Edinboro, Pennsylvania; Dr. Jonathan Mathews, Penn State Energy and Mineral Engineering; Dr. Helen Langa, American University; Dr. Barbara Jones, Westmoreland Museum of Art; Dr. Hedy da Costa Nunes, Muhlenberg College; Dr. William Pencak, PSU Department of History; Angela Breeden, Centre County Historical Society; and David Lembeck, Centre County Historical Society. Russ Graham presented opening and closing remarks as well as an overview of Bellefonte, Pennsylvania with historian Richard Knupp. Julianne Snider discussed the future of the Steidle Collection.

The evening before the symposium, the Centre Furnace Mansion hosted a reception for speakers and invited guests. A closing reception was held in the Earth and Mineral Science Museum's art gallery. A book signing for *Wonders of Work and Labor: The Steidle Collection of American Industrial Art* took place during the reception.

The day after the symposium, a group of participants traveled to the Pennsylvania State Museum in Harrisburg to view the exhibition, *A Common Canvas: Pennsylvania's New Deal Post Office Murals*. Public art and murals were commissioned by the Works Progress Administration Project (WPA) during the Great Depression in the United States. The subject matter usually reflected American industry and agriculture—genres similar to the Steidle Collection. The visit to this show was hosted by co-curators Dr. Curt Miner and Dave Lembeck who provided a guided tour of the gallery.



Members of the Steidle family with Eric Schruers at the "Wonders of Work and Labor" exhibition in the Art and Mineral Gallery (left to right: Howard Steidle Jr., Eric Schruers, Bret Steidle, and Ward Steidle).



Wayne Martin (1905-?)
Red Shale Quarry and Crusher, 1936
EMS Museum & Art Gallery Steidle Collection

BIENNIAL MEETING OF THE AMERICAN QUATERNARY ASSOCIATION (AMQUA)

The American Quaternary Association (AMQUA) is composed of an eclectic group of scientists who study a particular geologic time period, the Quaternary, or last Ice Age—the last two million years or so of Earth history. As a result, it involves scientists from a host of different disciplines—geology, paleontology, anthropology, climatology, oceanography, etc. The society meets once every two years to discuss a specific topic of interest to the group. In 2008, AMQUA met at PSU and was hosted by the EMS Museum & Art Gallery. There were 135 participants.

The topic of the meeting was climate change and coastal processes. The keynote address was given by Dr. Richard Alley from the Department of Geosciences at PSU. Other talks focused on how sea level changes in the future might impact coastal habitats and ecology, shore erosion and inundation of populated areas along coast lines. All of these topics are critical to understanding the multitude of impacts that could result from sea level rise driven by future climate change.

The meeting gives scientists an opportunity to interact socially, which facilitates discussions of new research and projects. The AMQUA meetings were held at the Penn Stater where participants were treated to a banquet of Pennsylvania barbecue and music provided by a local band, Grin and Barrit. There was a post-conference field trip to look at past changes along the Susquahanna River caused by previous global warming (ca. 14,000 years ago). Scientists were also able to view new exhibits on Geography of Climate Change in the EMS Museum Science Gallery.



Dr. Richard Alley, Geosciences

In conjunction with AMQUA, a "Teaching Climate Change" workshop was conducted at PSU for K-12 teachers.

NASA PA SPACE GRANT CONSORTIUM TEACHERS WORKSHOP

The EMS Museum & Art Gallery frequently works with faculty or other organizations to present workshops for teachers. The goals of these workshops are to provide teachers with current and up-to-date information on topics they teach in their classes. The NASA Pennsylvania Space Grant Consortium *Earth's History: Interactions Between Life and the Environment* teachers' workshop was hosted by Drs. Mark Patzkowsky and James Kasting of the Department of Geosciences with funding from NASA. Leah Bug from the Pennsylvania Space Grant Consortium coordinated the workshop. Both Julianne and Russ participated by working with the teachers in the creation of an exhibit on extinctions. The workshop was conducted during the summers of 2008 and 2009.

The first order of business in Summer 2008 was to determine the scope of the exhibit. The teachers decided that it would be best to focus on one extinction event, the Permian, rather than all five major extinctions in geologic time. The exhibit type (poster, case with specimens, computer interactive, etc.) was discussed next. A general design was formulated and assignments for work were made. The group then divided into two teams to continue work on the exhibit during the school year.

The group reconvened at PSU the following summer. Russ worked with one team on an exhibit case focusing on the extent of the Permian extinction with actual specimens and environmental reconstructions as well as signage explaining the extinction. Julianne worked with the other team to develop *Postcards from the Past* illustrating the five major extinctions. These postcards are in the form of five large panels that hang from the ceiling. The panels will discuss common aspects of the five extinction events. Their purpose is to place the massive Permian extinction in perspective. By the completion of the workshop the exhibits had been designed and will be constructed and installed in the Science Gallery during the 2010–2011 academic year.

The NASA Pennsylvania Space Grant Consortium Teachers Workshop helped the teachers see the extent of work necessary for the development of an exhibit. Like a good lesson plan, an exhibit requires research and extensive editing to get the salient points across. The specimens and supporting materials must be identified and located. The workshop should help the teachers design their own exhibits for their schools and help them to use existing museum exhibits more effectively.

ROCK, RATTLE AND ROLL & OTHER K-12 PROGRAMS

Russ Graham made 11 school presentations to 27 classes and 613 students in 2008–2009. All presentations were in central Pennsylvania grade schools and all of them focused on some aspect of geology, which is part of the National Standards for schools. Russ enjoys these presentations because it is a meaningful way to foster interest in science in young people at an early age.

The EMS Museum & Art Gallery participated in *Rock, Rattle and Roll*, an Earth science outreach sponsored by the Department of Geosciences. This program is for all fifth grade classes in the State College School district. The museum also hosted other educational programs presented by other departments (e.g., Geography). Russ hopes to initiate a program in the spring semester of 2011 in which graduate students from the various EMS academic departments can be trained to make presentations in their disciplines.



Kids learn more about deep sea life and extraterrestrials during a school visit to the EMS Museum & Art Gallery.



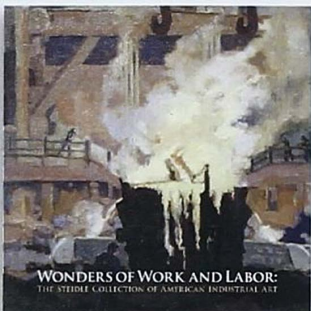
David Moscato, Geosciences student, talks with young visitors about fossils and bones at the Nittany Mineralogical Society Junior Education Day.



Julianne Snider explains skeletons at Penn State's Exploration Day.

ACCOMPLISHMENTS

WONDERS OF WORK AND LABOR: THE STEIDLE COLLECTION OF AMERICAN INDUSTRIAL ART



The book, *Wonders of Work and Labor: The Steidle Collection of American Industrial Art*, consists of a foreword, three chapters, a selected bibliography, 75 color plates, and a catalog of the Steidle collection with thumbnail size black & white photographs of the collection that Steidle amassed during his 25 year tenure as the dean of EMS (then known as Mining Industries). The first chapter is by Dr. Betsy Fahlman, Professor of Art History and Associate Director of the School of Art at Arizona State University. She is an expert on the genre of industrial art and introduces this topic in her chapter. The second chapter is by Betsy and Dr. Eric Schruers, an independent scholar and former student at The Pennsylvania State University. This chapter is the heart of the book and it places the

Steidle collection in perspective within the context of industrial art. The third chapter, by Eric, is a history of the Steidle collection and its founder, Edward Steidle.

The significance of the Steidle art collection is emphasized by this book. The collection is one-of-a-kind. Its unique qualities include its focus on the extractive industries once based in Pennsylvania. A number of the artists represented in the collection are women. At the time these paintings were made (the first half of the 20th century) it was difficult for women to get access to the industries (coal mines, steel mills, etc.) that they were painting. In fact, some of the artists had to disguise themselves as men to get into various areas.

This publication is the result of more than 13 years of effort by the EMS College. It began with discussions between Dr. John Dutton, former Dean of the Earth and Mineral Sciences College, John Deitz, former Director of Development for the college, and Eric Schruers. Eric had just finished his dissertation, which focused on the Steidle Collection. Betsy Fahlman was invited to participate in the publication because of her expertise in the area of industrial art. Julianne Snider, Assistant Director of the EMS Museum & Art Gallery designed the volume, did the layout, and compiled the catalog. She also coordinated its publication.

Wonders of Work and Labor would never have happened without the financial and conceptual support of the Steidle family. Edward Steidle's two sons, Edward Steidle Jr. and Howard Steidle, were involved in the initial conversations about the volume and Edward Steidle Jr. kept the hope alive. Both men provided part of the financial support for the publication and have long been staunch supporters of the collection and the EMS College. The volume is dedicated to both of them in memoriam. Other members of the Steidle family continue to support the Steidle Collection with special endowments.

As a result of this book, the Steidle collection will be featured in a special exhibition at the Grohmann Museum at Milwaukee School of Engineering in Wisconsin. The book is available through either the EMS Museum & Art Gallery (www.ems.psu.edu/outreach/museum) or Penn State University Press (www.psupress.org).

JULIANNE SNIDER RECEIVES POSTGRADUATE CERTIFICATE

The Assistant Director of the EMS Museum & Art Gallery, Julianne Snider, received a Master's Certificate in Museum Studies from George Washington University. Julianne completed the two year, on-line curriculum while continuing to work full-time. George Washington's Museum Studies Distance Education graduate certificate program targets working museum professionals. The program of study focused on



Julianne Snider gathering specimens for the museum

various aspects (legal, ethical, educational, preventative conservation, collections management, etc.) of museums. She is actively putting her training to work while carrying out her responsibilities for the EMS Museum & Art Gallery. One of the first things that she tackled was the legal aspects of copyright for the Steidle Art Collection. This knowledge was of integral importance in the publication of images of the art work in the new book, *Wonders of Work and Labor*. Julianne will be revising the EMS Museum & Art Gallery Collections Policy Manual in the near future. Congratulations to Julianne for this exceptional accomplishment.

FUTURE DIRECTIONS

MINING LAMP COLLECTION

The EMS Museum & Art Gallery has an outstanding collection of mining lamps that needs to be inventoried and cataloged. Some work was done on the collection with the donation by Norm and Alice Rubash of the of the Susan Dalton Collection several years ago. We hope to make cataloging this collection a priority for our collections work in the near future.

In 2008 and 2009, John Krenzel, a former graduate student in Energy and Mineral Engineering (EME), photographed about one-quarter of the collection for the EMS Museum & Art Gallery. He volunteered his time because he was interested in the collection. John worked with Julianne Snider to develop a small photo studio at the Collection, Education and Research Center (CERC). These photographs will be used to document the collection in our catalog, and will be available on our Web page so that others interested in these objects can see part of what the EMS Museum & Art Gallery has in its collection.



John Krenzel works with mining lamps in the "photo studio."

PSU OFFICE OF PHYSICAL PLANT (OPP) ENERGY PROGRAM

The museum will be participating in OPP's university-wide Energy Program through an Energy Conservation Measures project to retrofit existing lighting systems and track fixtures in the museum's galleries with occupancy sensors, dimmers, and energy-saving LED lamps. The goals for OPP are to raise awareness, conserve energy, and reduce energy costs. In addition, the goal for the museum is to improve the environmental conditions in the galleries in order to better exhibit and care for the paintings, objects, and geological specimens on display. LED lamps emit little or no ultraviolet light (UV)—a wavelength of light that can deteriorate pigments, plastic, paper, and some mineral specimens. The use of LEDs in museum galleries has been gaining acceptance as the technology has improved the light quality from the lamp; however, the

cost of LED lamps is still very high and out-of-reach for most museum budgets, including that of the EMS Museum & Art Gallery. The costs for this project will be covered by OPP. The EMS Museum & Art Gallery will be a high-profile venue for promoting energy efficient lighting and the first museum on campus participate in the Energy Program. The EMS Museum & Art Gallery exhibition, "Geographies of Climate Change" includes a local component highlighting Penn State's campus-wide efforts, including the Office of Physical Plant Energy Program, to create awareness, conservation, and become a "green" university

ACCREDITATION

One of the goals of the Earth and Mineral Sciences Museum & Art Gallery is to be accredited by the American Association of Museums (AAM). AAM is the primary professional organization for American museums and their staff. Accreditation is a measure of a museum's ability to maintain certain levels of performance in collections care and management, in quality of exhibits and programs for public outreach and in professionalism of its employees and board with regards to ethics and overall functioning. Accreditation is awarded following an on-site visit by a team of museum professionals to evaluate the museum.

To work towards this goal, the EMS Museum & Art Gallery participated in two surveys (CAP and MAP) in 2009-2010. The CAP survey focused on the museum's collections care and policies. It was sponsored by the Institute of Museum and Library Services (IMLS). The EMS Museum & Art Gallery staff completed advance survey forms and was visited by a professional conservator, Barbara Moore (Rochester, NY), selected jointly by IMLS and EMS Museum & Art Gallery staff. The conservator provided the EMS Museum & Art Gallery with a report based upon the responses to the written survey and her observations and interviews. The report focused on both the strengths and weaknesses of the museum as they relate to best practices.

The EMS Museum & Art Gallery took part in The Museum Assessment Program (MAP) sponsored by AAM. This survey focused on management structure and policies for the staff and the Advisory Board, the relationship of the museum to the university, security, collections policies and mission. The Earth and Mineral Sciences Museum & Art Gallery staff completed an extensive workbook prior to the visit by a museum professional, Jane Pickering (Associate Director, Peabody Museum, Yale University). Ms. Pickering provided the EMS Museum & Art Gallery with a report outlining strengths and weaknesses in the museum's overall management. These two reports will allow the EMS Museum & Art Gallery to work on its weaknesses before applying for accreditation, which we hope to do within the next five years. Executive Summaries from each report have been included below.

Accreditation will give the EMS Museum & Art Gallery wider recognition within the museum community, and is important in obtaining certain types of grants and awards. Finally, and most importantly, accreditation will provide us with a sense of accomplishment that our institution has been recognized as one of the few museums in the United States to achieve such a level of professionalism. Of the 17,500 institutions in the United States recognized as museums by the American Association of Museums, 779 have achieved accreditation, including 18% of the museums in our region (Mid-Atlantic).

CONSERVATION ASSESSMENT REPORT: EXECUTIVE SUMMARY

The Institute for Library and Museum Services' Conservation Assessment Program (CAP) helps museums evaluate their storage and exhibit methods, environmental conditions, and collections policies and procedures as they relate to the care and preservation of the collections. This CAP report is based on my visit to the Earth and Mineral Sciences Museum & Art Gallery (EMS Museum) on March 17-19, 2010. During my visit,

I was accompanied and assisted by Julianne Snider, Assistant Director, and John E. Simmons, Adjunct Curator, who supplied information about the collections and the facilities. In addition, I also met with Dr. William Easterling, Dean of the College of Earth and Mineral Sciences, Dr. Russell W. Graham, Museum Director, and several representatives of the Museum Advisory Board. Suggestions in this CAP report are offered as a starting point for this next phase in the development of the museum by providing a framework for a long-range collections care plan. The Museum Assessment Program (MAP) report that will be completed later this year will complement this report by focusing on the public side of the museum.

The EMS Museum collections represent an exceptional and irreplaceable resource for the college, the university, and the community. The geological collections have been identified as one of the premier collections in the United States, while the art collection has recently been featured in a respected art journal. The journal article plus a book about the collection were authored by Betsy Fahlman, Arizona State University, a leading authority on American Industrial Art.

The Director, Assistant Director and Advisory Board of the EMS Museum are doing an excellent job of bringing collections management to a highly professional level and thoughtfully improving collections care as much as resources allow. It is unusual to see an organization with such a small staff so effectively and professionally plan and execute exhibitions and perform outreach programs while also working actively to improve standards in every aspect of the management of these collections. This achievement is clearly a measure of the experience and dedication of these individuals.

Consolidating and building on recent improvements, I believe the EMS Museum is now well placed to strengthen its contribution to the college and the community. To assist in this planning, recommendations made throughout this report are summarized and prioritized in Section 8. Many immediate and short-term improvements can be implemented with current resources; mid-term projects will require planning and some reallocation of institutional resources; and more ambitious or long-term projects will take longer to achieve and will require the museum to undertake serious fund-raising. Funding is available from federal and state granting agencies to fulfill many of these goals, and the PSU Development Office may be able to assist in identifying mining or other businesses, or private individuals, who would also be glad to assist.

Based on my review of the museum, its facilities, and its practices, there are five areas that stand out as needing attention. Each represents an opportunity for EMS Museum with the support of the college and the university, to move to a new level of professionalism in the care of its collections and, in fact, to set an example on the campus and in the region.

An overview of the most important recommendations is presented below:

- **Security Issues:** The museum's security is very weak in all areas: the Deike exhibit galleries, the corridor exhibit cases, the storage spaces in the Special Services Building (SSB), and those that remain in the Deike Building. The paintings on exhibit in the EMS Library do not have as much security as the books. Suggestions to improve security are offered in Sections 5 (Exhibitions) and 6 (Storage) of this report. These include making existing electronic systems functional, using security screws for paintings on exhibit, strengthening locks on exhibit cases where possible, adding a keypad with personal codes (or swipe cards) to the CERC storage room, and adding the same metal security strips now used for books to the paintings in the library. Consult the University Police in making these decisions and engage their interest in protecting the collections.
- **Environmental Concerns:** Good storage and exhibit environments are the foundations of good long-term collections care. Factors to consider are temperature, relative humidity, light, pollutants and pests.

The museum has an excellent storage room in the CERC, but some environmental adjustments are needed to best suit the various collections types (Section 6, Storage). Because conditions cannot, realistically, be controlled in the exhibition galleries and the library, other approaches are suggested (Section 5, Exhibitions).

- **Collections Management:** Until now, the museum's collections records have existed only on paper, including acquisition information, catalog ledgers, and specimen labels. Inventories are incomplete. This situation is clearly not satisfactory for collections with so much scientific, cultural and monetary value.

The museum has recently started to enter data into an excellent database designed for both art and scientific collections (PastPerfect), but there remains a very large backlog. Steady and reliable help is needed to enter this quantity of information. This assistance can be temporary, because once data is entered records will be easy to maintain, but the immediate task ahead is formidable.

- **Collections Storage:** Room 113 at the CERC could be the envy of any museum, but the EMS Museum is not able to benefit from its potential because the existing storage furniture (moved from campus storage with the collections in 2008) is cumbersome to use (drawers stick!) and makes extremely inefficient use of space. There is not enough room, using this furniture, to properly arrange all of the collections now housed in the room, and certainly not enough space to move in the remaining collections still in storage in the Deike Building. Furthermore, the crowding in storage greatly limits the institution's access to its collections.

The museum should undertake a "space needs study" to determine what modern storage equipment would best suit the collections, with specifics of how many drawers, how many shelves, and what cubic footage of storage units are required. Mobile storage should be considered. Based on this study, the museum will be positioned to apply for a federal grant to purchase the equipment. (Note that federal grants that support collections storage upgrades all require "matching funds" from other sources. In addition, "swing space" will be needed for temporary collections storage while new equipment is installed.)

- **Emergency Planning:** Finally, in coordination with the PSU Emergency Management Office, the University Police, and the State College Fire Department, the EMS Museum should develop an emergency plan that includes consideration of the collections. An emergency plan saves precious time locating key personnel and assistance in the event of a fire, flood, or theft, and can dramatically limit damage to, or loss of, the collections after an emergency event.

Barbara P. Moore, Conservator
April 14, 2010



Among the collections of the Earth and Mineral Sciences Museum & Art Gallery are rock and mineral specimens and historic mine safety equipment

MUSEUM ASSESSMENT PROGRAM INSTITUTIONAL ASSESSMENT REPORT: EXECUTIVE SUMMARY

The Earth and Mineral Sciences Museum & Art Gallery was founded in 1900 and is part of the College of Earth and Mineral Sciences at Pennsylvania State University. It is currently located in purpose-built gallery spaces in the College's main building and in a collections facility in the Special Services Building (SSB) 5 miles off-campus. A review of the Museum in the early 2000s led to the appointment of the first profes-

sional director and a change in focus of the Museum from being a traditional 'mineralogical museum' to an important outreach tool for the activities of the entire College. There was also a renewed focus on the renowned Steidle Collection of Industrial Art. The Museum's vital outreach function is widely acknowledged by the Dean and College faculty and the broad ownership of the Museum is testament to the value of its activities and the skill and dedication of its current staff. This relationship between the museum and its parent 'department' is a model for other university collections.

The Museum has big ambitions, most notably to bring all its operations to a high professional standard worthy of the College and accreditation with the American Association of Museums (AAM). However there are a number of areas where significant progress must be made before that is possible. Most importantly, the Museum must engage in a serious and comprehensive effort to produce a strategic plan that will guide its activities over the next few years. The College must play a major role in this endeavor as active support from the parent body is essential to the success of the process. Other vitally important issues include improvements to collections care, documentation, security, development, and community involvement. For example, the College has provided space for collections storage, fitted out to a high standard, but which is filled with unsuitable furniture and is not large enough to store all the collections. Additional storage space in the SSB should be made available at the first opportunity to enable proper unpacking of the collections. Such a commitment is also essential for fund-raising for new storage furniture, particularly from federal agencies. The College also has an obligation to deal with urgently needed security upgrades for both the exhibits and collections. Staff also need to spend time on transferring documentation into an electronic form using the PastPerfect Collections Management system, developing the volunteer program; and working with the Development Office to investigate new sources of funding.

The Museum has a strong vision for its future, a highly experienced and dedicated staff, and the support of the College Dean. It now needs to develop a strategy for the future that positions it to expand its role as a vital part of the College and surrounding communities and ensure all its activities meet a high standard of excellence.

Jane Pickering, Deputy Director & Assistant Director for Public Programs
Peabody Museum of Natural History, Yale University
June 15, 2010



Art and science come together in the exhibitions Life in the Dark and Beyond the Edge of the Sea in the Art and Mineral Gallery of the Earth and Mineral Sciences Museum & Art Gallery.

ACHIEVEMENTS

STAFF

Russell W. Graham, Museum Director
(April 2004–Present)

Julianne Snider, Assistant Director
(January 2006–Present)

John E. Simmons, Adjunct Curator
(March 2008–Present)

Sean Miller, Development Officer, part time

Reita Rocky, Office Manager, part time

CONTRIBUTING PSU STAFF

2008-2009

Chuck Anderson (Earth and Environmental Systems Institute)

Ken Biddle (EMS Shop)

William Genet (EMS Shop)

Paul Markowski (Meteorology)

Tim Robinson (EMS)

2009-2010

Chuck Anderson (Earth and Environmental Systems Institute)

Erin Becker (Biology)

Ken Biddle (EMS Shop)

Jean Brenchley (Biochemistry / Molecular Biotechnology)

Chuck Fisher (Biology)

Mike Fleck (Material Science and Engineering)

William Genet (EMS Shop)

Christopher House (Geosciences)

Dan Jones (Geosciences)

Jennifer Loveland-Curtze (Biochemistry / Molecular Biotechnology)

Jennifer (Jenn) Macalady (Geosciences)

Vanya Miteva (Biochemistry / Molecular Biotechnology)

Heather Nelson (Pennsylvania Space Grant Consortium)

Liz Podowski (Biology)

Tim Robinson (EMS)

Eric Sagmüller (Material Science and Engineering)

STUDENT EMPLOYEES

2008-2009

Alex Bryk
Laurie Eccles
Dieu Truong

2009-2010

Laurie Eccles
Kathleen Galligan
Dan Mills

VOLUNTEERS

2008-2009

Jane Allard
Don Brandonburg
Niki Brandonburg
Sue Brown
Joel Christine
James Cornette
Steve Cota
Carol Cota
Jessica de Smet
Kathleen Gallagher
Eric Grimm
Steve Johnson
Brenda Johnson
Zachary Kita

John Krenzef
Rosemary Lanzata
Ulli Limpitlaw
Angela Mathias
Don McCuan
Kathy Miles
Dan Mills
David Moscato
Matt O'Donnell
Melissa Pardi
Gregory Smith

2009-2010

Aaron Allard
Daniel Allard
Jane Allard
Allen Bailey
Judith Bailey
Michael Bailey
Simone Bernard
Don Brandonburg
Niki Brandonburg
Sue Brown
James Cornette
Carol Cota
Steve Cota
Jessica De Smet
Luke D'Lubey
Helen Easterling
Kendall Free
Eric Grimm
Corey Harkless

Brian Harkless
Scott Harkless
Brenda Johnson
Steve Johnson
Gwedulyn King
Anna Lavender
Ulli Limpitlaw
Akie Lloyd
Bill Markey
Angela Mathias
Don McCuan
Ryan McNally
Conor McNally
Kathy Miles
Lauren Milideo
David Moscato
Matthew O'Donnel
Melissa Pardi
Heather Smith

EXHIBITIONS

2008-2009

- 9/1 *Pegmatites*: Nittany Mineralogical Society exhibit case
 10/1 Four cases of minerals' specimens from the collection
 11/1 Blue/White case of minerals: specimens from the collection
 2/9 *Charles Darwin, A Man of Enlarged Curiosity*: Commemoration of Darwin's 200th birth date
 5/5 *Wonders of Work and Labor*: art from the collection commemorating the publication of *Wonders of Work and Labor, The Steidle Collection of American Industrial Art*

2009-2010

- 11/1 *John Passaneau*: photographs of minerals using digital focus stacking technique
 11/1 *Minerals of Mexico*: Nittany Mineralogical Society exhibit case
 11/15 EMS Dean's faculty awards case
 8/15 *Tornado Simulator*: interactive exhibit simulating tornadic winds allows visitors to control air speeds for the vertical and circular components of air flow, graphics on tornado facts and related research at EMS Department of Meteorology
 9/1 *Geographies of Climate Change*: four exhibit modules focusing on climate research by Department of Geography faculty for the GEMS Symposium
 2/1 *Beyond the Edge of the Sea*: traveling exhibit. Collaboration between EMS Museum and NASA Pennsylvania Space Grant Consortium.
 2/1 *Life in the Dark*: multiple exhibit modules focusing on Astrobiology research at PSU

MUSEUM TOURS, SPECIAL PROGRAMS & PRESENTATIONS

2008-2009

	PARTICIPANTS
5/20 Mars Landing, (Pennsylvania Space Grant Consortium) event	42
5/23 Bellefonte Family YMCA Pre-School, museum tour	34
6/2 Research in Parker's Pit and Don's Gooseberry Pit, field camp	43
6/5 Penns Valley school group, museum tour	51
6/12 ArtFest	47
7/16 Education Equity, reception	26
9/18 GEMS, reception	41
9/18 Greenwood Friends School, museum tour	17
9/28 PSU, Department of Geoscience, Paleontology class, museum tour	22
9/30 Thompson Society, Friends of the Centre Furnace Mansion, collections tour	30
10/16 Friends School Haverford 4th grade, museum tour	16
10/17 Huntington Middle School, museum tour	27
10/26 Home School Group, museum tour	36
11/3 Boy Scouts, museum tour	8
11/8 North Carolina family, museum tour	10
11/19 Ted Daeschler, Tetrapod Evolution, presentation (with Nittany Mineralogical Society)	52
12/5 Mount Union Area Schools, museum tour	64
1/6 State College Fifth Grade (three classes), bone picking	91

1/8	State College Fifth Grade (three classes), bone picking	72
1/9	State College Fifth Grade (three classes), bone picking	75
1/9	Dr. Solomon Billingly, museum tour	1
2/3	Faculty Senate, museum tour	12
2/9	State College 1st & 2nd graders (four classes), museum tour & fossil identification	84
2/12	Darwin & Lincoln birthday celebration	92
2/18	Science Diving, presentation	12
2/19	<i>Rape of Europa</i> screening (with Center County Historical Society)	15
2/26	The Village, museum tour	21
2/28	Earth and Mineral Sciences Exposition (EMEX), fossil table	223
3/2	State College Friends School, museum tour	24
3/3	Home School Group, museum tour	18
3/3	Biogeography class, museum tour	16
3/4	Biogeography class, museum tour	12
3/6	Biogeography class, museum tour	10
3/12	Lancaster Home School Group, museum tour	14
3/13	Lebanon County Home School Group, 6–12 yrs old, museum tour	20
3/26	Young Scholars of Central Pennsylvania, museum tour & fossil identification	7
3/28	Nittany Mineralogical Society Junior Education Day, fossil table	312
4/2	Bald eagle Third Grade, museum tour	32
4/3	State College Day Care, museum tour	15
4/8	College of Education graduate class, presentation	12
4/9	State College Cub Scout Pack, geology badge	8
4/9	State College Cub Scouts & Parents, museum tour	16
4/15	International class, museum tour	19
4/18	Exploration Day, fossil table.	2500
5/5	<i>Labor's Legacy: Pennsylvania Industrial Art</i> symposium	63
2009–2010		
6/28	Nittany Mineralogical Society Gem & Mineral Show presentation, Julianne Snider, <i>Care and Feeding of Vertebrate Fossils</i>	42
7/22	Parker's Pit Research Project field camp	25
7/22	Don's Gooseberry Pit Project field camp	25
8/5	High Achievers Group, Washington, DC, museum tour	15
9/18	Obelisk Dinner, presentation of the McFarlane-Ross donation of Aaron Harry Gorson painting	175
10/29	Barbara and Lee Maimon, museum tour	2
11/20	Earth Talks presentation, Russ Graham, <i>Pleistocene Extinctions</i>	38
11/22	GeoGenetics presentation, Russ Graham, <i>Pleistocene Environments & Animals</i>	27
12/1	Sue Anne Graham and Susan Swartz, museum tour	2
12/4	Round Hills Elementary, Williamsport, museum tour	50
1/8	State College Fifth Grade (three classes), bone picking	85

1/9	State College Fifth Grade (three classes), bone picking	78
1/10	State College Fifth Grade (three classes), bone picking	73
1/28	Bellefonte Boy Scouts, museum tour	11
2/12	Department of Anthropology presentation, Russ Graham, <i>Pleistocene Extinctions</i>	42
2/13	State College Boy Scouts, museum tour	13
2/25	Beyond the Edge of the Sea & Life in the Dark reception	43
2/28	Beyond the Edge of the Sea & Life in the Dark exhibit opening	89
3/1	Earth and Mineral Sciences Exposition (EMEX)	180
3/19	Women in Science & Engineering (WISE), reception & awards ceremony	32
3/26	Karen Jacobson & Cindy VanDover, presentation and workshop	42
4/7	Sean Miller and Jenny Bickford, museum tour	2
4/15	Nittany Mineralogical Society Junior Education, fossil table	321
4/17	Exploration Day, fossil table	3200
4/17	Mount Union High School art class, museum tour	15
4/26	Department of Journalism, museum tour	2
4/28	Phillipsburg Third Grade (3 classes), museum tour	67
4/29	Kinesology Class, museum tour	29
5/16	Aaron Harry Gorson family, collections tour	5



Tim Robinson explains "science on a sphere" to museum visitors



Chuck Anderson shows off pyrite in 3-D on the GeoWall in the Science Gallery.

FIELD TRIPS

2008–2009

5/6	A Common Canvas: Pennsylvania's New Deal Post Office Murals, Pennsylvania State Museum, Harrisburg field trip	24
5/9–19	Prehistory of Florida/Science Diving class field trip	14
10/16	Vertebrate Paleontology class field trip to Carnegie Museum of Natural History, Pittsburgh	21

SCHOOL VISITS (GRAHAM)

2008–2009

5/13	Fergusson Township, fossils	121 (five classes)
5/19	Fergusson Township, rocks	100 (four classes)
5/20	Panorama Elementary School, rocks	73 (three classes)
4/1	Park Forest Elementary, fossils	42 (two classes)
4/6	Easterly Parkway Elementary, geology	43 (two classes)
4/8	Park Forest Elementary, fossils	41 (two classes)
4/8	Panorama Elementary School, fossils	45 (two classes)
5/26	Park Forest Elementary, Pennsylvania geology	38 (two classes)
5/26	Park Forest Elementary, Pennsylvania geology	41 (two classes)
5/27	Park Forest Elementary, Pennsylvania geology	37 (two classes)
5/27	Park Forest Elementary, Pennsylvania geology	21 (one class)

2009–2010

4/5	Panorama Elementary, Pennsylvania geology	45 (2 classes)
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PROFESSIONAL PRESENTATIONS

2008–2009

- Arroyo, J., O. Polaco, R. W. Graham, E. Johnson. 2008. *North American Ursid (Mammalia: Ursidae) Decrease in Biodiversity from the Pleistocene to Modern Times*. AMQUA 2008 Biennial Meeting, Pennsylvania State University, University Park.
- Graham, R. W. 2008. *Mammal Response to late Quaternary Climate Fluctuations along the Appalachian Gradient: Implications for Future Global Warming*. Second Appalachian Karst Symposium, East Tennessee State University, Johnson City, TN, May 7–10, 2008.
- Graham, R. W., E. C. Grimm, A. C. Ashworth, S. T. Jackson, J. W. Williams and B. Bills. 2008. *NEOTOMA—a multidisciplinary and Relational Database for Terrestrial Paleocological Datasets for the Pliocene, Pleistocene and Holocene*. International Geological Congress, Oslo, Norway, August 6–14.
- Grimm, E. C., R. W. Graham, S. T. Jackson, A. C. Ashworth, J. W. Williams and B. Bills. 2008. *NEOTOMA: A Multiproxy Paleodatabase for the Pliocene, Pleistocene and Holocene*. AMQUA 2008 Biennial Meeting, Pennsylvania State University, University Park.
- Simmons, J. E. and J. Snider. 2008. *Ciencia y Arte en la Ilustración Científica: Preservación, Pintura, y la Percepción de la Naturaleza*. Faculty Seminar, Universidad Nacional de Colombia, Bogotá.
- Snider, J. 2008. *The Future for the Steidle Art Collection*. Labor's Legacy: Pennsylvania Industrial Art Symposium, American Philatelic Center, Bellefonte, Pennsylvania.

2009–2010

- Cabrales, J., O. J. Polaco, R. W. Graham, and E. Johnson. 2009. *North American Late Pleistocene Felid (Mammalia: Felidae) Diversity and its Impoverishment at the Beginning of the Holocene—Climate Change, Human Impact, and Competition*. Society of Vertebrate Paleontology 69th Annual Meeting
- Graham, R. W. & H. G. McDonald (organizers). 2009. North American Paleontology Convention Symposium S12. *Global Change and Biotic Response: Perspectives from the Quaternary, Windows to the Future*, Ninth North American Paleontology Convention, University of Cincinnati.
- Graham, R. W. and E. L. Lundelius, Jr. 2009. *Mammal Response to Five Million Years of Environmental Fluctuations in North America*. Ninth North American Paleontology Convention, University of Cincinnati.
- Graham, R. W., E. C. Grimm, B. Bills, A. Ashworth, S. Jackson and J. Williams. 2010. *NEOTOMA Database: A Window into Biotic Response to Climate Change during the Past 5 million years*. Poster, World University Network Conference: Global Climate Change. Pennsylvania State University
- Graham, R. W., T. W. Stafford, Jr. and H. A. Semken, Jr. 2010. *AMS Radiocarbon Dating Individual Taxa and Individual Specimens: Implications for Small Mammal Paleoecology*. European Geological Union 2010 Meeting, Vienna.
- Pardi, M. and R. W. Graham. 2009. *Structure of non-analog mammal communities along the Laurentide Ice Front of North America*. Ninth North American Paleontology Convention, University of Cincinnati.
- Simmons, J. E. 2008. *Conservation and Re-housing of the Human Body Slice Exhibit*. Society for the Preservation of Natural History Collections and Natural Science Collections Alliance joint annual meeting, Oklahoma City, OK
- Simmons, J. E. 2008. *Writing Collections Management Policies*. Workshop, Society for the Preservation of Natural History Collections and Natural Science Collections Alliance joint annual meeting, Oklahoma City, OK
- Simmons, J. E. 2009. *Sistematica, Política, y la Conservación de Recursos Naturales*, seminar at the Instituto de Ciencias Naturales, Museo Medico at Universidad El Bosque
- Simmons, J. E. 2009. *Conservation of Fluid Preserved Exhibit Specimens*, Chicago Area Conservation Group, Chicago IL.
- Simmons, J. E. 2009. *Developing Best Practices and New Standards for Fluid Preservation*, Society for the Preservation of Natural History Collections, Leiden Medical School, Leiden, The Netherlands
- Simmons, J. E. 2009. *Collections Planning, Seminar for Historic Administration*, Indianapolis, IN.
- Simmons, J. E. 2010. *Blithe Spirits: What We Know (and Don't Know) About Fluid Preservation*, Nordic Meeting on Collections Care, Stockholm
- Simmons, J. E. 2010. *Fluid Collections Workshop*, Nordic Meeting on Collections Care, Stockholm
- Simmons, J. E. 2010. *All That Remains*. Seminar, University of Texas El Paso, El Paso, TX
- Simmons, J. E. 2010. *Museos, Educación y Conservación*. Seminar, Universidad El Bosque, Bogotá, Colombia
- Simmons, J. E. and J. Snider. 2010. *Ciencia y Arte en la Ilustración Científica: Preservación, Pintura, y la Percepción de la Naturaleza*. Seminar, Universidad de Magdalena, Santa Marta, Colombia
- Simmons, J. E. 2010. *Beyond Boundaries: Contemplating Using Contract Registrars*. American Association of Museums Annual Meeting, Los Angeles
- Simmons, J. E., A. J. van Dam, and R. Crèvecoeur. 2009. *Developing best practices and new standards for fluid preservation*. Bridging Continents: New Initiative and Perspectives in Natural History Collections, 24th Annual Meeting, Society for the Preservation of Natural History Collections, 6–11 July 2009, Leiden, The Netherlands
- Simmons, J. E. and J. Snider. 2010. *De Alejandria a la Anatomia de Gray—las Técnicas de la Preservación y la Historia de Ilustración Anatómica*. Faculty Seminar, Universidad Nacional de Colombia, Bogotá
- Snider, J. and J. E. Simmons. 2009. *Observation and Distillation—Preservation, Depiction, and the Perception of Nature*. Bridging Continents: New Initiative and Perspectives in Natural History Collections, 24th Annual Meeting, Society for the Preservation of Natural History Collections, 6–11 July 2009, Leiden, The Netherlands
- Snider, J. 2010. *Museum Lighting*. Invited lecture, Exhibit Design, Department of Integrative Arts, Penn State School of Arts and Architecture, University Park

PROFESSIONAL PUBLICATIONS

2008–2009

- Simmons, J. E. 2008. *Vine of the Soul. Medicine Men and their Plants and Rituals in the Colombian Amazon*, by Richard Evans Schultes and Robert F. Raffauf. Synergistic Press, San Francisco. [Book review] *Indigenous Nations Journal* 6(1):179–182.
- Simmons, J. E., A.C. Campbell, and E. Greenbaum. 2007 [published 2008]. Presence of elemental mercury in fluid preserved specimens. *Collection Forum*, 22(1–2):32–36.
- Veltre, D. W., D. R. Yesner, K. J. Crossen, R. W. Graham and J. B. Coltrain. 2008. Patterns of faunal extinction and paleoclimatic change from mid-Holocene mammoth and polar bear remains, Priblof Islands, Alaska. *Quaternary Research* 70:40–50.

2009–2010

- Cruz-Muñoz, Valeria, J. A. Cabrales, and R. W. Graham. 2009. Rodents and Lagomorphs (Mammalia) from the Late-Pleistocene Deposits at Valsequillo, Puebla, México. *Current Research in the Pleistocene*. 26:147–149.
- Carrasco M. A., A. D. Barnosky, R. W. Graham. 2010. Quantifying the Extent of North American Mammal Extinction Relative to the Pre-Anthropogenic Baseline. *PLoS ONE* 4(12): e8331. doi:10.1371/journal.pone.0008331
- Semken, H. A., Jr., R. W. Graham and T. W. Stafford, Jr. 2010. AMS 14C analysis of late Pleistocene non-analog faunal components from 21 cave deposits in southeastern North America. *Quaternary International*.
- Simmons, J. E. 2009. When Father Chimborazo took the frogs away. *Leaf Litter* 2(2):19–28.
- Simmons, J. E., and J. Snider. 2010. *Ciencia y arte en la ilustración científica*. Cuadernos de Museología, 40 pp. Sistema de Patrimonio Cultural y Museos, Universidad Nacional de Colombia, Sede Bogotá.
- Simmons, J. E. 2010. Collections management policies. Pp. 24–29 in Buck, R. A. and J. A. Gilmore (editors), *MRM5. Museum Registration Methods*. Fifth edition. American Association of Museum, Washington, D.C., xi + 516 pages.
- Simmons, J. E. 2010. History of Museums. Pp. 2096–3106 in Bates, M. J. and M. N. Maack (editors). *Encyclopedia of Library and Information Sciences*, Third edition. CRC Press, 5742 pages.

PROFESSIONAL DEVELOPMENT

2008–2009

RUSSELL W. GRAHAM

- Society of Vertebrate Paleontology annual meeting, Cleveland, OH
- Second Appalachian Karst Symposium, East Tennessee State University, Johnson City, TN
- American Quaternary Association biennial meeting, The Pennsylvania State University, University Park, PA
- Pennsylvania Industrial Art Symposium, Bellefonte, PA
- International Geological Congress, Oslo, Norway

JULIANNE SNIDER

- Society for the Preservation of Natural History Collections and Natural Science Collections Alliance joint annual meeting, Oklahoma City, OK
- Museum Cleaning Basics*. Society for the Preservation of Natural History Collections workshop, Oklahoma City, OK
- Grant Writing*. Society of American Archivists workshop, University Park, PA
- Master's Certificate, Museum: Collections Management and Care, The George Washington University Museum Studies Distance Education Program
- Small Museums Association annual meeting, Ocean City, MD

American Association of Museums annual meeting, Philadelphia, PA

Disaster Preparedness. Association of Museums–American Institute for Conservation webinar

JOHN E. SIMMONS

Society for the Preservation of Natural History Collections and Natural Science Collections Alliance joint annual meeting, Oklahoma City, OK

Small Museums Association annual meeting, Ocean City, MD

American Association of Museums annual meeting, Philadelphia Pennsylvania

2009–2010

RUSSELL W. GRAHAM

AED/CPR training and certification, University Park, PA

Society of vertebrate Paleontology annual meeting, Bristol, England

European Geological Union, Vienna, Austria

Ninth North American Paleontological Convention, Cincinnati, OH

World University Network Conference: Global Climate Change, The Pennsylvania State University, University Park, PA

JULIANNE SNIDER

Archival Exhibitions. Society of American Archivists workshop, University Park, PA

Past Perfect Museum Software 4.0 webinar

Society for the Preservation of Natural History Collections annual meeting, Bridging Continents—New Initiatives and Perspectives in Natural History Collections, Leiden, Netherlands

Synthesizing and Communicating Science. The HBFR Science Links Program, American Institute of Biological Sciences webinar

AED/CPR training and certification, University Park, PA

Twitter in Action. V&A (London), Women's Museum (Dallas), and Museums Etc Ltd. webinar

Nordic Meeting on Collections Care, Swedish National Museum, Stockholm

Handling Non-Traditional Objects: From the Impossible to the Reality. American Association of Museum / PACIN webinar

JOHN E. SIMMONS

AED/CPR training and certification, University Park, PA

Society for the Preservation of Natural History Collections annual meeting, Bridging Continents—New Initiatives and Perspectives in Natural History Collections, Leiden, Netherlands

American Association of Museums annual meeting, Los Angeles, California

Nordic Meeting on Collections Care, Swedish National Museum, Stockholm

PROFESSIONAL SERVICE

2008–2009

RUSSELL W. GRAHAM

Chair, Host Committee for the Biennial meeting of the American Quaternary Association

Member of the Board of Directors of the Lamb Spring Archaeological Preserve, Douglas County, CO

Reviewer for professional journals and grant proposals (7 articles & 6 proposals)

Judge for EMS Graduate Student Poster Competition

Judge for Geosciences posters

Theses advisor for graduate and undergraduate students

JULIANNE SNIDER

Visiting Professor, graduate certificate course: *ilustración Científica*, Universidad Nacional de Colombia, Bogotá, Colombia, Facultad de Artes

Committee advisor for Discovery Space (State College Children's Museum)

Museum liaison to Center for Science and the Schools (CSATS)

JOHN E. SIMMONS

Prepared Skeletal Preparation manual for use by EMS students

Visiting Professor, Universidad Nacional de Colombia, Bogota, Museología y Gestión del Patrimonio (2009 to present), Administración de Colecciones

2009-2010

RUSSELL W. GRAHAM

Member of the Board of Directors of the Lamb Spring Archaeological Preserve, Douglas County, CO

Reviewer for Professional Journals and Grant proposals (10 articles)

Judge for Geosciences Posters

Graduate and Undergraduate student advisor for theses

JULIANNE SNIDER

Arts Operations team member for PSU Office of Human Resources Competency Program for Job Classification

Adjunct Instructor, *Museum Education*, Spring 2010, Juniata College, Huntingdon, Pennsylvania

Visiting Professor, master's program: *ilustración Científica*, Universidad Nacional de Colombia, Bogota, Maestría en Museología y Gestión del Patrimonio

Committee advisor for Discovery Space (State College Children's Museum) Committee

Museum liaison to Center for Science and the Schools (CSATS)

JOHN SIMMONS

Reviewer for Professional Journals (2 articles)

Adjunct Instructor, *Museum Education*, Spring 2010, Juniata College, Huntingdon, Pennsylvania

Visiting Professor, Universidad Nacional de Colombia, Bogota, Museología y Gestión del Patrimonio (2009 to present), *Administración de Colecciones*

Director de tesis for Sandra Jaime Silva (2009-2010), Universidad Nacional de Colombia, Bogota, Museología y Gestión del Patrimonio

IDENTIFICATIONS, QUESTIONS & CONSULTATIONS

2008-2009

5/28	Barracloopus	Quartz crystals, concretion & metamorphic pebble
7/30	Brian Myers	Quartz crystals
8/25	Ulli Limpitlaw	Prairie dog skull
8/28	Susan Powell	Radiocarbon dating for an alum
9/3	Nick Holmes	Slag iron presumed meteorite
9/4	Teresa Augustiniac	Sandstone cobble with weathering rind
10/14	Steve Soltis	Glass slag
11/3	Don Coxey	Iron stone concretion
11/4	Linda Ganaway (Madison, AL)	Ludwig Henning Painting
11/19	Jim Burns (Canada)	Prehistoric Elk in Eastern NA

1/5	John Gifford (University of Miami)	Ground sloth radius
1/12	Teachers Workshop	Teleconference on exhibit
1/15	Kabir Hassan	Nittany Mineral Society
1/20	Amy Kishbaugh	Volcanic glass (obsidian)
2/16	Walter (email)	Sedimentary rock with secondary mineralization and stress fractures with spheroidal weathering
2/20	GEMS Outreach	Teleconference
3/3	Robert Fink (Tyrone)	Slag
4/2	Teachers Workshop	Teleconference on exhibit
4/9	Nicholas Padula	Concretion
5/29	Robert Cargen (Little Falls, NY)	Fluorite
2009-2010		
6/8	Kathleen Sillman (Bellefonte Schools)	Identification of 10 rocks
7/3	Museum visitor	Slag
8/7	Stefanie Johnson (State College)	Stream cobble: quartzite
8/10	John Soubik	Epsomite crystals in basement
9/8	Megan Fletcher & Children	Invertebrate fossils
9/10	Greg Bassham (King's College)	Conglomerate thought to be fossils
9/14	Nate Lorenz (Dickensen College)	Horse tooth from cave
9/16	Gary Langsdale (PSU)	Hematite
10/2	Kenneth Luther	Rock kits
10/16	Richard Stucky (DMNS)	Horse tooth
10/19	Beth Trimble (State College)	Rock presumed to be tooth
11/9	Brooke Borel (Science Illustrated)	Pleistocene extinctions
11/9	Catherine Amidon (Plymouth State Univ.)	Guidelines for small art museums
11/10	Nick Bascom (research Penn State)	K/T extinctions
11/13	Brooke Borel (Science Illustrated)	Pleistocene extinctions
11/16	Brooke Borel (Science Illustrated)	Pleistocene extinctions
11/17	Brooke Borel (Science Illustrated)	Pleistocene extinctions
11/17	US News & World Report	Global warming
12/15	Dave Pacchioli (Research Penn State)	K/T extinctions
5/17	Ray Keisler (Allentown)	Rocks & fossils
5/25	John Butler (Oil City)	Sandstone with iron stains

HOST

2008-2009

Teaching Climate Change (Affiliated with AMQUA Meeting)
 American Quaternary Association Biennial Meeting
 Symposium: Labor's Legacy: Pennsylvania Industrial Art

2009–2010

Beyond the Edge of the Sea / Astrobiology, teacher training workshop

Bonnie Jacobs Geoscience Colloquium

NASA Teachers Workshop on Extinctions

PRESS & LISTINGS

2008–2009

listing, American Association of Museums *Directory of Museums*

listing, AAA *TourBook* for Pennsylvania

interview, Russ Graham, *The Columbus Dispatch*, Columbus Ohio, stag moose

interview, John Simmons, *Science/Technology* (Nov. 3, 2008), 86:25–29, preservation techniques

article, Herberger College of Arts Newsletter, Arizona State University, Steidle collection

interview, Russ Graham, Julianne Snider & Angela Breeden, *Centre Daily Times*, Steidle symposium

interview, Russ Graham, *National Geographic Society Special*, climate change

article, *Centre County Historical Society Newsletter*, Steidle symposium

article, *American Art Review* (21.3 May–June 2009), Steidle collection

interview, Russ Graham, Robert Boyd, McClatchy Newspapers, Pleistocene extinctions

interview, John Simmons, *Chemical and Engineering News* (86:44, 2008), "Seeking an eternal solution"

2009–2010

article, Knight Rider Washington Bureau, Robert Boyd, Pleistocene extinctions

article, *Seattle Times*, Robert Boyd, Pleistocene extinctions

article, *St. Paul Pioneer*, Robert Boyd, Pleistocene extinctions

article, *Charleston Gazette*, Robert Boyd, Pleistocene extinctions

article, *Richmond Times Dispatch*, Robert Boyd, Pleistocene extinctions

comments, *Proceedings of the National Academy of Sciences* paper, Jackie Grom Science

video interview, John Simmons, PSU Center for the Performing Arts, *Frog and Toad are Friends*

comments, *US News & World Report*, endangered animals threatened by global-warming

article, *Research at Penn State online*, K/T extinctions

article, *Nittany Mineralogical Society Newsletter*, Mexican Minerals exhibit

interview, John Simmons, *Science Studio* program, radio KTEP, University of Texas–El Paso

PROPOSALS

2008–2009

NSF: Collaborative Research: Floral and Faunal Community responses to Late-Quaternary Climate Change

IMLS: Conservation Assessment Program

NSF: Mammalian Biogeography and Paleoecology of the Black Hills of South Dakota: implications for Island Biogeography and Conservation Biology

2009–2010

NSF: Geoinformatics: Collaborative Proposal: Neotoma II

MAP: Management Assessment Program, Association of American Museums

CAP: Collections Assessment Program, Institute of Museum and Library Sciences

WUN: NEOTOMA, A community database for ecological responses to climate change of the Recent past

GRANTS RECEIVED

2008-2009

NASA: Teacher Workshop on Extinction with Mark Patzkowsky

NSF: Collaborative Research: Floral and Faunal Community responses to Late-Quaternary Climate Change

2009-2010

MAP: Management Assessment Program, Association of American Museums

CAP: Collections Assessment Program, Institute of Museum and Library Sciences

NSF: Geoinformatics Collaborative Proposal: NEOTOMA II

WUN: NEOTOMA: A community database for ecological responses to climate change of the Recent past

CASH DONATIONS

2008-2009

Howard "Chip" Steidle

Larry Grayson

Sean Miller

2009-2010

Drs. Hu and Mary Barnes

Mr. Sean Miller

Steidle Family

R. Larry Grayson

MATERIAL DONATIONS

2008-2009

Portable Seismograph: Gregory Budnik

Fragment of giant beaver (*Castoroides* sp.) incisor:
Tim White

2009-2010

Diffusion exhibit: Materials Research Society

Titanic materials exhibit: Materials Research Society

Aaron Harry Gorson painting: Cathleen McFarlane
Ross & Walter Ross

FRIENDS OF THE EMS MUSEUM & ART GALLERY

Helen W. Bannon

Peter R. Bannon

Rebecca P. Brooks

Robert P. Brooks

Bernd J. Haupt

John R. Hellmann, Jr.

Kathleen Cossick Hellmann

John Ritzenthaler Company

James F. Kasting

Mary Corrigan Knight

Paul G. Knight

Catherine G. Lyons

Sean M. Miller

Heather M. Nelson

Gwen Kaufman Nese

Jon M. Nese

Jason R. Nolan

Lee A. Nolan

Leslyn Mortimore Radomsky

Mark C. Radomsky

Dennis M. Reese

Karen A. Reese

Hampton N. Shirer

Rebecca D. Shirer

Ann Taylor

Noelle R. Waggett



Museum director, Russ Graham, shows off rodent skeleton found in a bottle



Members of the Center County Historical Society's Thompson Society visit the collection range at the CERC



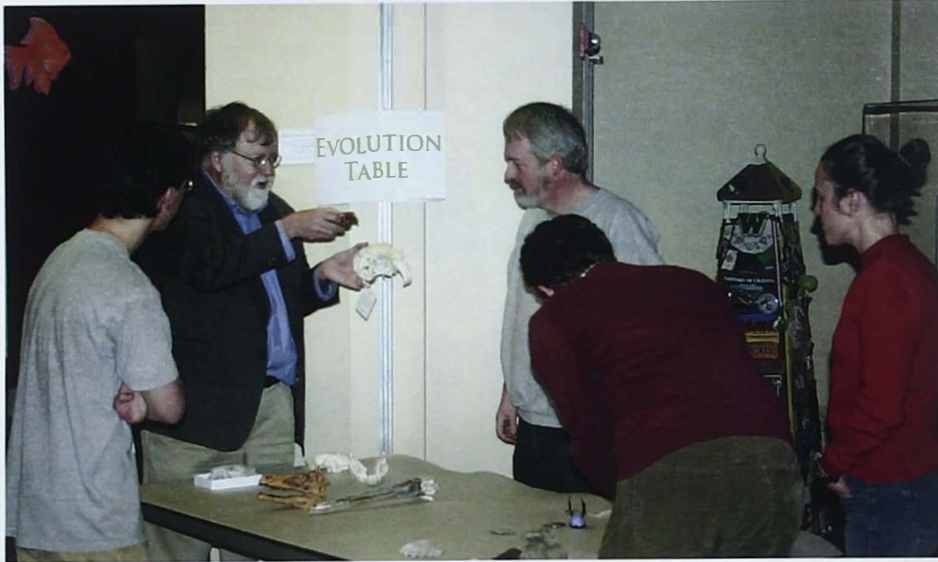
Relatives of painter Aaron Harry Gorson visit the CERC during graduation weekend to see the Gorson paintings in the museum's Steidle Collection (Sophie Gorson, 2010, Communications; second from right)



Museum visitors enjoy the Wonders of Work and Labor exhibition in the Art and Mineral Gallery



Museum volunteers sort fossil bones from cave sediment in South Dakota



Russ Graham talks to EMS students about the fossil record and evolution during the Charles Darwin / Abraham Lincoln birthday party on February 12, 2009 at the EMS Museum & Art Gallery.

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PENNSTATE



EMS MUSEUM & ART GALLERY

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