

Tracks

Volume 37, Number 1

News from The Cleveland Museum of Natural History



See you later, *Allosaurus*



January/February

2009

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Cleveland Museum of
NATURAL HISTORY

Keeping Track with the Director

Last August, a group of Museum members led by Director of Conservation and Curator of Botany Dr. Jim Bissell, Curator of Vertebrate Zoology Dr. Tim Matson, Biodiversity Coordinator David Kriska and Cleveland State University's Dr. Bob Krebs trekked to the Grand River on private land that the owner (a fan of Bissell's) had agreed to open for a Museum field trip. They intended to survey mussels and seine for fish.

Bissell suspected that this portion of the Grand might be good habitat for rare mussels. Downstream lay the Museum's Cash/Hertrick Preserve, home to the best mussel beds within the Grand River Gorge. The Harpersfield Dam was 3½ miles upstream.

The group set about their work. Finding mussels basically involves running your hands through the gravel riverbed and fishing out anything that feels interesting. On this day, what turned up was fantastic: two endangered species of mussel, the clubshell and Northern riffleshell, as well as the salamander mussel, a species of special concern in the state.

And while these discoveries attest to the fine water and habitat quality of the Grand River and made for an exciting time for those members on the trip, Bissell emphasizes that

it's actually the rare members field trip that *doesn't* turn up something new or interesting. Whether it's finding a new population of Bicknell's geranium at the North Kingsville Sand Barrens or an unexpected cache of a rare dragonfly species' nymphs along the Grand River, almost every outing has a "wow" moment.

This alone should make members field trips sound all the more tempting to try. But consider this as well: These trips take you to natural areas around the region that are usually not open to the general public and contain rare habitats that are often the finest in the state. You can find the latest list of field trips in our "Classes & Field Trips" brochure and on our Web site.

Participating in a members field trip or two this year is just one of the many ways you can make the most of your Museum membership. You might also consider taking one of our members classes. These offer instruction on subjects ranging from astronomy to sustainability. If listening to interesting speakers is more your style, the *Explorer Series* brings experts to the Museum to talk about a variety of topics, while the Curator's Forum lecture series taps into the talent right here on our staff.

To get even more involved, you might also explore membership in a Museum associated society. These groups cater to a range of interests, from microminerals to nature art and photography. Museum membership is required of all group members.

Members are also eligible to volunteer, a wonderful way to really get to know the Museum. Consider becoming a docent, a specially trained volunteer who works with visitors and helps them better understand Museum exhibits and displays. Docents also assist with Museum events, such as the annual University Circle-wide Parade the Circle and Holiday CircleFest.

I hope that these ideas have inspired you to resolve to take advantage of all of the benefits and opportunities that Museum membership offers. We're here to help you and your loved ones and friends make that vital, all-too-elusive connection with the natural world around you. Let us open your eyes and expand your horizons this year.

Bonnie Cummings

Bonnie Cummings
Interim Executive Director
Chief Operating Officer

A fishing party with a purpose

The Trout Club's annual banquet offers the chance to have fun and raise funds for coldwater conservation and fisheries preservation.

On Saturday, March 7, the Trout Club will host its 31st-annual banquet. All Museum members are invited to join the celebration and experience what's sure to be a memorable evening.

The banquet offers fun, food and excitement for everyone. There will be three raffles, a silent auction, live auction and door prizes. While many of the items in the auction and raffles are fly-fishing oriented — rods, reels, clothing, flies, tying materials and tools, guided trips and the like — many are not.

Previous auctions have featured artwork, antiques, vacation packages and items for the home. Dinner will be a sumptuous four-course meal accompanied by a selection of fine wines.

The proceeds from this event have traditionally been donated to various conservation and environmental programs related to coldwater fisheries. By attending the banquet, you will help us continue this tradition. Since it was formed in 1978, the Trout Club has contributed almost \$240,000 to the Museum and other local and national

conservation organizations, including Trout Unlimited, Lake County Metroparks, Geauga Park District, Western Reserve Land Conservancy and Cuyahoga Valley Environmental Education Center.

The event will be held at the Museum, with doors opening at 6 pm. Ticket prices are \$75 per individual and \$140 per couple. If you are interested in attending the banquet or learning about the Trout Club, contact Karen Menn to make your reservation, (216) 231-4600, ext. 3278, or kmenn@cmnh.org.





Personnel from the Museum's Exhibits Division and Research Casting International assembled the Museum's new *Tyrannosaurus rex* cast, which debuted on December 20.

T. rex and *Triceratops*: A battle for the ages

This new addition to the Museum's permanent exhibits brings the Late Cretaceous' largest dinosaurs back from the past for a rematch.

At the end of the Cretaceous Period, *Triceratops* and *T. rex* were the largest dinosaurs roaming the western interior of North America.

T. rex needed a lot of meat to keep itself fed, and *Triceratops* would have been a good source of food. But taking on a *Triceratops*, armed with lance-like horns and protected by a bony skull frill, was no easy undertaking.

The battle between these titans was revisited last December when the Museum unveiled the newest addition to its permanent exhibits: a full-size cast of a *Tyrannosaurus rex*. It is mounted in face-off position with the *Triceratops* cast the Museum acquired in 2007. It's a display unlike any other in the world.

For more than a century, *T. rex* has epitomized the predatory dinosaur. It flourished between 65 million and 68 million years ago.

Paleontologists have discovered and excavated about 20 *T. rex* specimens. All of these have been found in North America, in Texas, Utah, Wyoming, Montana, Alberta and Saskatchewan. Based on these specimens, scientists estimate that an adult *T. rex* was about 18 feet tall and 46 feet

long, and weighed about 11,000 pounds. Its skull was 4 to 5 feet long.

T. rex took about 13 to 19 years to reach full size. To support its rapid growth, a teenage *T. rex* would have needed 350 to 1,000 pounds of meat a week, the equivalent of a whole cow.

The bite of an adult *T. rex* carried about 3,000 pounds of force. Comparatively, a human has up to 175 pounds of bite force and an alligator (the strongest bite force of any living animal) up to 2,125 pounds.

In recent decades there has been debate over whether *T. rex* was a predator or scavenger. From what scientists know about typical modern carnivore behavior, it was probably both.

The original specimen from which the Museum's new *T. rex* was cast was discovered by rancher Kathy Wankel in 1988 in the badlands of eastern Montana. She brought the find to the attention of Jack Horner, curator of paleontology at the Museum of the Rockies in Bozeman, Montana. He led a crew that excavated the site in 1989 and 1990.

The specimen was nearly 90 percent complete, making it one of the most complete fossils of a *T. rex* in the world. The

bones were prepared between 1991 and 1993 and are now on display at MOR.

The Museum's cast was created by Research Casting International, based in Ontario, Canada. Its purchase was made possible by a grant from the Bicknell Fund. The Museum obtained the *Triceratops* cast in 2007 with a grant from the William J. and Dorothy K. O'Neill Foundation.

Fast Facts About the Museum's *T. rex*

36½ feet long
13 feet high at hips
8 feet from floor to top of skull
5-foot-wide body

On the Cover: Where's *Allosaurus*?

Last November, *Allosaurus* was dismantled and taken off display in Kirtland Hall. This move made room for the new *T. rex* and *Triceratops* display. It also gives Museum staff the opportunity to remount the specimen in a position that reflects current thinking on theropod posture. It will return to display later in 2009.

Face value

A new Museum-produced exhibition explores forensic facial reconstruction.

Television shows such as “CSI” have made the process of reconstructing a face from just a skull — called forensic facial reconstruction — part of popular culture. A new Museum exhibition, titled *Making Faces: The Art and Science of Forensic Facial Reconstruction*, takes a closer look at this scientific art. It goes on display in Fawick Gallery starting February 28.

The exhibition details the process of identifying the remains of a dead body from start to finish. “We’re going all the way from a skeleton found in the woods to identifying it as the exact right individual,” explains Dr. Linda Spurlock, the Museum’s Director of Human Health and an accomplished facial reconstruction artist.

The first step in establishing an identity is to create a biological profile from the victim’s remains. This consists of gender, age, physical stature and race. These characteristics narrow down the field of possible identities dramatically, Spurlock explains.

Forensic facial reconstruction helps narrow down the field still further.

Visitors will see how artists re-create faces using sketches and sculptures. A video shows Spurlock creating a 3-D reconstruction based on a skull cast purchased from a casting lab. Visitors can try to match the reconstruction to the appropriate photo in a lineup.

“The facial proportions of a reconstruction are exactly right,” Spurlock explains. “If a person had a big, square chin, that will show up; if she had tiny teeth and thin lips, they will show up.”

The whole idea, she says, is to get a resemblance that’s close enough to catch the attention of a friend or relative of the victim. “Maybe that’s enough to get the dental records of a person to see if they match.”

Even if a reconstruction bears an

almost identical resemblance to a victim, the identification isn’t considered “positive” until there is a definitive match using physical evidence, such as DNA or X-rays. The exhibition contains several stations where visitors can challenge themselves to correctly match sample dental and heel-bone X-rays to the correct ones in a lineup of choices.

The exhibition also includes descriptions of some real-life unsolved cases. One of these involves a woman whose body washed up on the lake shore along the Cedar Point Peninsula in April 1997. Despite posting a description of the body throughout North America, no leads emerged. Linda Spurlock created a two-dimensional reconstruction of the dead woman to assist Sandusky police, and it will be featured along with the story of her discovery.

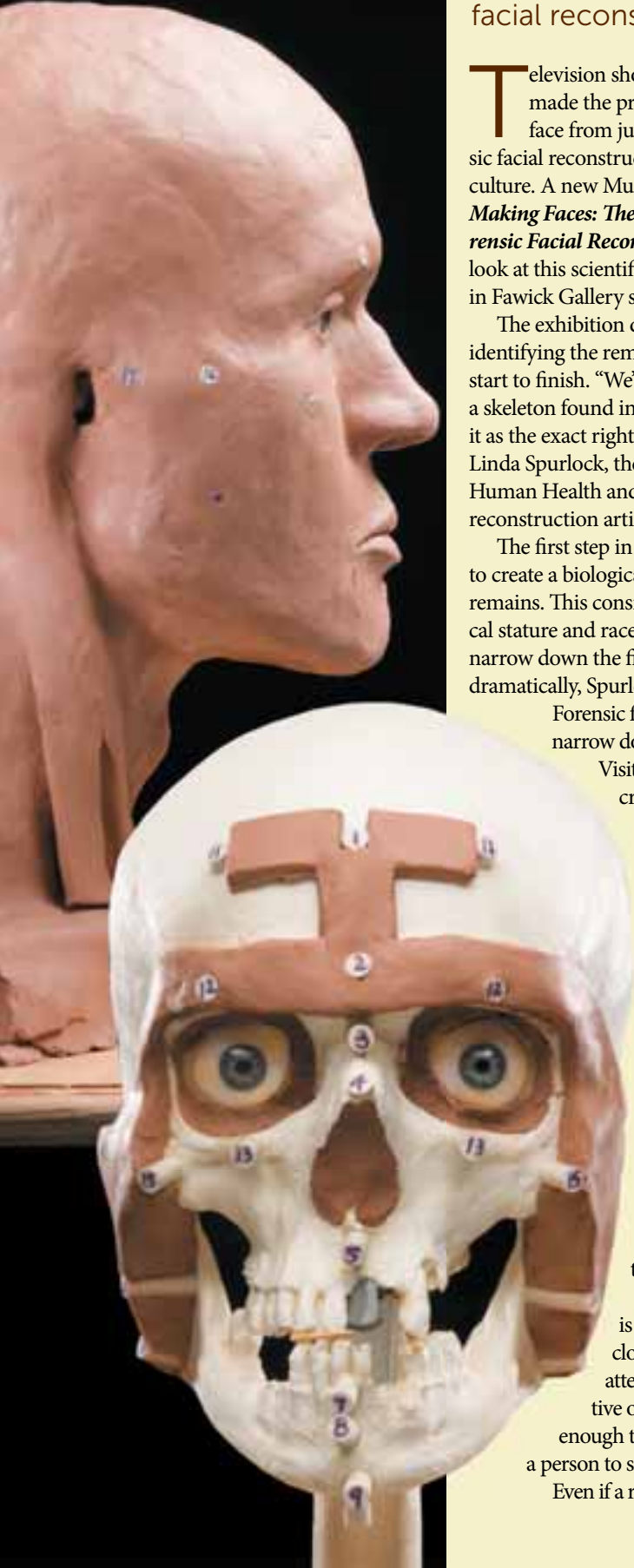
Facial reconstruction’s usefulness isn’t limited to law enforcement. It also helps us understand our ancestors — what they might have looked like and their cultural practices.

The exhibition will show 3-D reconstructions of two specimens of *Australopithecus afarensis*, the ancient human ancestor that lived 3 million to 3.9 million years ago. One is a male, nicknamed “Chuck,” created by the late Barb Barrish, who directed archaeological field programs for the Museum. The other is a female, the famous “Lucy,” created by Anne Sanford, casting lab supervisor in the Department of Physical Anthropology, who recently completed a forensic facial reconstruction class taught by renowned expert Betty Pat Gatliff. Accompanying photos will show the methods that were used to put the two together.

Equally intriguing will be Spurlock’s reconstructions of the face of a 70,000-year-old Neanderthal child and a 2,000-year-old Incan man whose skull was intentionally deformed and bears a healed surgical scar.

Visitors inspired by the exhibition can try their hand at the reconstruction process. A video will feature Spurlock explaining how to sketch a face from a skull. Visitors then can lay tracing paper on a back-lit photo of a skull with tissue-depth markers in place to create their own sketches. Depending on the results, they can either post their work or take it home.

Making Faces will be on display through June 7.



About this issue

Happy new year, and happy new *Tracks*! We've taken the opportunity to start the year with a fresh new look for our members newsletter that is intended to make it more user-friendly as well as more environmentally friendly.

The paper we've chosen for *Tracks* is certified by the highly respected Forest Stewardship Council and is manufactured using biogas energy. It is made from 100 percent recycled paper from post-consumer sources that is processed without chlorine. The FSC certification means that every step in the paper production and printing process has been verified to be environmentally responsible. You can learn more about this program at www.fsc.org.

We've reduced the dimensions of the publication to maximize the efficiency of our paper use during the printing process. Thanks to advances in the printing industry, we are able to bring you a four-color publication without adding cost. As it has been for many years, all ink used to print *Tracks* is soy-based.

Inside each issue, you'll find we now offer Museum events listed in a convenient block-calendar format. We've reorganized program and event information. And on the back cover, we're featuring special content just for kids.

We'd like to thank the many readers who responded to our survey in last year's July/August issue and provided lots of useful feedback. We'll be making additional tweaks to design and content throughout the year. As always, we welcome your comments and suggestions. You may direct them to (216) 231-4600, ext. 3260, or pubs@cmnh.org.

Eco-Minded: ideas for living sustainably

It's a cold truth: Heating systems in the United States contribute more than a billion tons of carbon dioxide and other greenhouse gases to the atmosphere each year. Reducing the energy needed to heat homes in winter makes sense from a climate-change standpoint as well as a monetary one.

Here are a few tips to save energy and money heating your home this winter, courtesy of the GreenCityBlueLake Web site:

- In most homes, you can save about 2 percent of your heating bill for each degree you lower the thermostat (for at least eight hours each day). So turn down the heat when you're not going to be home or when you're asleep, or install a programmable thermostat that will do it for you. It's a myth that it takes more energy to reheat a cold house than to keep it warm all day (or night).
- The greatest heat loss in a home is usually from air leakage. The most cost-effective place to stop it is in the attic. The least cost-effective measure is window replacement.
- If you're insulating, start with the attic first, then move to sidewalls. The third-best insulation site, where applicable, is a basement crawl space, followed by perimeter joists at the top of the foundation walls and then the foundation walls themselves.

- In a typical house, about 30 percent of the air that moves through the ductwork is lost due to leaks and poorly sealed connections. You can correct this by sealing ducts that are accessible (in basements or crawlspaces) using a sealant called duct mastic. (Do not use duct tape, as it's not long-lasting.)
- Make sure heat isn't escaping around leaky doors and windows by caulking or weather-stripping cracks and gaps.
- A home energy audit by a certified energy rater will help you evaluate what weatherization measures your house needs. To find a list of professionals in Ohio, visit www.natresnet.org/directory/raters.aspx. For more information about home weatherization and other energy conservation topics, visit www.gcbl.org/energy/conservation-and-efficiency.



Travel China with the Museum!

Total Eclipse and Highlights of China July 15 to 27



Join Museum Observatory Coordinator Clyde Simpson and Wildlife Resources Director Harvey Webster on a once-in-a-lifetime trip to China. Witness the longest total solar eclipse of the 21st century in the southern province of Anji. Also on the itinerary are some of China's most beautiful regions and sights, including the Forbidden City, the Great Wall and Temple of Heaven in Beijing, and Xian's famed terra-cotta warriors.

For more information, visit www.cmnh.org or call (216) 231-4600, ext. 3254.

Introducing our newest natural areas

The Museum's Natural Areas Program acquired these six properties — each one harboring rare habitats, animals and plants — during the last six months. Together, they bring the total amount of land protected by the Museum to more than 3,400 acres.

Judy Semroc



The vernal pools on the Glasky and Cuccaro properties support healthy populations of wood frogs.

Kightlinger Property at Penn Line Fen

100 acres, Richmond Township, Southern Ashtabula County, on the Ohio-Pennsylvania state line within the Ashtabula River watershed

Penn Line Fen is one of the most significant unprotected wetland systems in the Ashtabula River watershed. The Museum has been studying it since 1986. To date, at least 10 state-listed plants have been found on the properties that comprise it. The Kightlinger Property is a part of this important system and will provide a crucial anchor in our efforts to protect additional land here. In autumn 2008, Natural Areas staff found additional fen seepages on the Kightlinger Property, and Museum Curator of Botany and Director of Conservation Dr. Jim Bissell located an endangered plant called bristly smartweed. Purple avens, a potentially threatened plant, is abundant in one of these seepages. Additional field surveys are planned for the spring, which could lead to the discovery of more rare plants. A corporation is purchasing this property using mitigation money. The land will be donated to the Museum in early 2009.

The work of the Museum's Natural Areas Program goes far beyond just buying and holding land. We document rare habitats, flora and fauna and create plans that preserve and restore biodiversity. Help us safeguard our region's natural beauty for future generations to visit, study and enjoy by making a donation to the Natural Areas Program, either by check or online at www.cmnh.org (be sure to note that your gift is for the Natural Areas Program).

Jim Bissell



The Glasky and Cuccaro properties protect unique habitat at Geneva Swamp.

Glasky and Cuccaro Properties at Geneva Swamp

57 acres (Glasky) and 10 acres (Cuccaro), Geneva Township, Ashtabula County, just north of the Geneva city limits, approximately 3 miles south of Lake Erie

Geneva Swamp is one of the largest and most significant remnant swamp forests on the Lake Erie plain. Similar swamp forest systems once stretched from Lorain County east to Pennsylvania on the lake plain. The vernal pools on the Glasky and Cuccaro properties support healthy populations of wood frogs, which are declining across much of their range in Northeast Ohio. False hop sedge, a state-listed plant, was found on an adjacent property in 2007 and is likely present on the Glasky and Cuccaro properties as well. The only known Ohio occurrences of several species of beetles are at Geneva Swamp; two undescribed beetle species have already been found at the swamp. The Museum closed on the Glasky Property last summer and the Cuccaro Property late in 2008. They were purchased using funds from The Kent H. Smith Charitable Trust matched to generous donations from many individuals. The Museum hopes to eventually protect Geneva Swamp in its entirety.

Judy Semroc



The ground beetle *Chlaenius sericeus* can be found at Geneva Swamp.

Flint Property at Kingsville Swamp

5 acres, North Kingsville, Ashtabula County

The Flint Tract is adjacent to the Museum's existing Kingsville Swamp Preserve. It buffers that preserve's sensitive wetlands and allows Natural Areas staff to easily access both sides of the large wetland system. The latter feature is useful for stewardship efforts and members field trips. Kingsville Swamp is the second-largest peatland on the Lake Erie plain. It contains an excellent example of mixed-shrub swamp, a once-common habitat that has become increasingly rare in recent decades. This property was purchased in March 2008 using funds from The Kent H. Smith Charitable Trust matched to donations from many individuals.



The Steiner Tract on the Grand River buffers mussel beds downstream.

Lyman-Powell-Armstrong Hemlock Swamp

13 acres, Conneaut, Ashtabula County

Armstrong Swamp has been studied by botanists and biologists, including Dr. Jim Bissell, since the 1960s. The preserve contains high-quality seepage swamps surrounded by old-growth hemlock stands. It also supports large populations of goldthread, a plant that is very rare in the Cleveland region. This property was donated to the Museum by the Armstrong and Horwood families in 2008. In August 2008, the Natural Areas Division dedicated the Lyman-Powell-Armstrong Hemlock Swamp in honor of the Armstrong family. During a hike following the dedication, Bissell found pale straw sedge, a threatened species.

Steiner Tract at the Grand River Terraces

50 acres, Trumbull Township, Ashtabula County

The 50-acre Steiner Property is the newest addition to the Grand River Terraces. It was purchased from Mrs. Rosalie Steiner in the summer of 2008. The property contains more than 35 acres of old-growth forest and has frontage on Bronson Creek, several headwater streams and a Class III cold-water stream. Cerulean Warblers and hobblebush, a state potentially threatened plant, are present on the property. Protecting the Steiner property also helps ensure the safety of mussel beds downstream from the property on the Grand River near the mouth of Bronson Creek.

2009 Natural Areas Native Plant Sale

The Natural Areas Division is holding its second-annual native plant sale. Several new species are being offered this year, including wafer ash, striped maple and rose-shell azalea.

An order form with a full list of species for sale is available for download at www.cmnh.org (type "plant sale" into the Search box) or by calling Garrett Ormiston at (216) 231-4600, ext. 3352.

Please mail completed order forms and payment by April 14 to:

Natural Areas Division
Attn: Garrett Ormiston
The Cleveland Museum of Natural History
1 Wade Oval Drive
Cleveland, OH 44106

All plants must be picked up at the Museum during one of two scheduled pick-up times: Friday, April 24, from 4 to 8 pm, and Saturday, April 25, from 10 am to 2 pm.

If you have any questions, please contact Garrett Ormiston at (216) 231-4600, ext. 3352, or gormisto@cmnh.org.



Judy Semroc

A Museum-led hike at the Lyman-Powell-Armstrong Hemlock Swamp



Acknowledgments

The Museum gratefully acknowledges the following gifts and grants made between September 13 and November 14, 2008.

The Community Health, Wellness & Fitness Fair, a program offered in conjunction with the exhibition *RACE: Are We So Different?*, was sponsored by **Cuyahoga Community College** (\$3,000); **Kaiser Permanente** (\$1,700); **MetroHealth System** (\$1,000); **Neighborhood Progress, Inc.** (\$1,500); and **United Way of Greater Cleveland** (\$500).

YWCA Greater Cleveland contributed \$10,000 to sponsor the Town Hall Meeting "Inclusion, Equity, Privilege, Leadership and Social Responsibility: Are We Making Progress in the 21st Century?" **Cleveland State University Division of Institutional Diversity** contributed \$5,000 to sponsor the Town Hall Meeting "Let's Talk About Race." **Cuyahoga Community College** contributed \$3,000 to sponsor the Town Hall Meeting "RACE: Politics, Biology, Anthropology and Sociology."

OMNOVA Solutions Foundation sponsored an "Akron Night" at the exhibition *RACE: Are We So Different* with a gift of \$2,000.

A grant of \$15,000 from the **Eaton Charitable Fund** was received to support *RACE: Are We So Different?* (\$10,000) and health programming (\$5,000).

Sponsors for the Multicultural Community Reception included **Enterprise Rent-a-Car** (\$5,000) and the **Northeast Ohio Regional Sewer District** (\$3,000).

Western Pennsylvania Conservancy awarded a grant to the Botany Department to conduct a plant survey at Presque Isle and Erie Bluffs.

Grants in support of the Greater Ohio Policy Center were received from **The Columbus Foundation** (\$10,000), **The George Gund Foundation** (\$300,000) and the **Surdna Foundation, Inc.** (\$200,000).

A \$5,000 grant from **The Lubrizol Foundation** will support Dr. Michael Ryan's vertebrate paleontology research in the Gobi Desert during the 2009 field season.

The following individuals generously contributed \$1,500 or more to the Museum's Annual Fund and/or to a restricted fund and therefore have been named to **The Linnaean Society**.

- Linnaean Kingdom** (\$10,000 and above)
 - Anonymous (1)
 - Anne M. Jones
- Linnaean Order** (\$2,500-\$4,999)
 - S. Sterling and Judith McMillan
 - Stephen and Amanda Morris
 - Hugh and Gretta Pallister
- Linnaean Family** (\$1,500-\$2,499)
 - Anita E. Chapman
 - Arthur F. Kohn

- John and Sally Morley
- Emily C. Parkman
- Tim and Heather Ryan
- Rosalie Steiner

The following organizations generously contributed \$1,000 or more to the Museum's Annual Fund and/or to a restricted fund and therefore have been named to **The Corporate Partners Program**.

- Corporate Heron** (\$10,000-\$24,999)
 - Eaton Corporation
- Corporate Fellow** (\$5,000-\$9,999)
 - Enterprise Rent-A-Car
 - Giant Eagle
 - The Leiden Cabinet Company
 - The Lubrizol Foundation
- Corporate Patron** (\$1,500-\$2,499)
 - The Capital Group Companies, Inc.
 - Ferro Foundation
 - Kaiser Permanente
 - OMNOVA Solutions Foundation
- Corporate Contributor** (\$1,000-\$1,499)
 - Team Wendy

The Museum has made every effort to include all appropriate names. If you are aware of any gifts not honored, please contact Jeffrey Gueulette, Director of Annual Giving, at (216) 231-4600, ext. 3287.

The Museum extends a warm welcome and our deepest gratitude to members of the **Marie Odenkirk Clark Society**. Your legacy gift ensures that the Museum continues to inspire and educate people of all ages about natural diversity and achieving a sustainable future.

We welcome new members:

- Brant C. Gebhart
- Lucy I. Weller

We would like to recognize and thank those Clark Society members who continue to grow their legacies:

- Dr. Joan P. Lambros
- William M. Osborne, Jr. and Amelia S. Osborne
- Peter and Donna M. Pesch

We convey our sincere appreciation for gifts from the following estates:

- Helen C. Cole
- Robert R. Cull
- Eleanor B. Davenport
- Marion Donahue
- George J. Hess
- Alyce M. Jarr
- Lewis V. McCarthy
- Mary Katherine Trump
- Ellen V. Walters

Members of the Marie Odenkirk Clark Society have made a profound gift and personal commitment to the Museum through their estate plans or planned giving. If you are considering a gift in perpetuity to the Museum, please call Sheryl Hoffman, Director of Major and Planned Gifts, at (216) 231-4600, ext. 3310.

The Museum gratefully acknowledges the citizens of Cuyahoga County for their support through Cuyahoga Arts and Culture.



IRA Charitable Rollover Provision Reinstated

The Emergency Economic Stabilization Act of 2008 reinstated the previously expired provision that permitted Individual Retirement Account (IRA) owners 70½ years or older to make distributions directly to qualified organizations. The ruling applies to 2008 and 2009 and may offer an excellent opportunity for you to support the Museum and enjoy a reduction in your taxable income.

The provision exempts funds directly transferred ("rolled over") from an IRA to a qualified charitable organization from an individual's taxable income. The IRA owner must authorize such a transaction. If the funds are withdrawn and then contributed to a charity separately, they are considered taxable income.

Limitations do apply; transfers for 2009 must be completed by December 31, 2009. If you are considering taking advantage of an IRA Charitable Rollover, we recommend that you consult your financial and tax advisers.

To discuss this or other planned giving options, please contact Director of Major & Planned Gifts Sheryl L. Hoffman at (216) 231-4600, ext. 3310, or shoffman@cmnh.org.

Making Tracks

Museum co-hosts SVP Annual Meeting

From October 15 to 18, the Museum and Case Western Reserve University co-hosted the Society of Vertebrate Paleontology's 68th Annual Meeting, which was attended by nearly 1,200 paleontologists from around the world. Museum Research Associate and Case Western Reserve University Professor Dr. Darin Croft and Museum Curator of Vertebrate Paleontology Dr. Michael Ryan chaired the host committee, which included a number of Museum staff members in key roles.

The Museum was the site of a pre-conference lecture by Dr. Neil Shubin of the University of Chicago, the opening reception for the conference, a benefit auction and social, and several field trips. The remainder of the conference proceedings, which included 640 oral and poster presentations, took place at the Renaissance Cleveland Hotel downtown.

Staff and volunteers from throughout the Museum assisted with numerous aspects of the event. Curator of Invertebrate Paleontology Dr. Joe Hannibal led two field trips, one to classic Cleveland Shale fossil-fish localities in the area and the other to explore rocks and fossils in downtown Cleveland. Curator of Physical Anthropology Dr. Yohannes Haile-Selassie led a half-day field trip to the Physical Anthropology Laboratory. Ryan and Vertebrate Paleontology Casting Lab Technician David Chapman led a workshop on basic casting and molding techniques. Haile-Selassie and Case's Dr. Scott Simpson chaired a special symposium examining early hominid evolution between 3 million and 4.5 million years ago.

During the course of the conference, Ryan, Haile-Selassie, Museum Preparator Gary Jackson and Curator of Archaeology Dr. Brian Redmond, along with Museum Research Associates Croft and Case's Dr. Scott Simpson, presented or co-presented 10 scientific papers or posters.

Staff papers and presentations

Curator of Ornithology Dr. Andy Jones published the paper "Evolution in a tropical archipelago: comparative phylogeography of Philippine fauna



Edward "Ted" Kirtland Hine, Jr., a descendent of Dr. Jared Potter Kirtland, visited the Museum last October. He received a guided tour of the Museum's galleries, particularly Kirtland Hall of Prehistoric Life, from Museum curators Dr. Joe Keiper and Dr. Michael Ryan. Kirtland, who lived from 1793 to 1877, was a medical doctor, civic leader and founder of the Kirtland Society of Natural Science, an organization that eventually became the Museum. Kirtland was Hine's great-great-uncle.

and flora reveals complex patterns of colonization and diversification" with co-author Dr. Robert S. Kennedy, Director of Natural Science at the Massachusetts-based Maria Mitchell Association, in the November 2008 *Biological Journal of the Linnean Society*.

From August 30 to September 5, Curator of Paleobotany Dr. Shya Chitaley attended the joint congress of the 12th International Palynological Congress and the 8th International Organisation of Palaeobotany Conference, held in Bonn, Germany. She presented a paper, co-written with Dr. Jiri Bek of the Academy of Sciences of the Czech Republic, titled "A new isoetalean lycopsid *Polysporia lugardonii* sp. nov. and its spores from the Upper Devonian of Cleveland, Ohio, USA." On the conference's closing day, Chitaley was honored as the only person to have attended every joint congress since their inception in 1980.

Curator of Invertebrate Paleontology Dr. Joe Hannibal attended the Geological Society of America meeting in Houston last October. He presented the paper "Cultural geology: connecting the geological sciences with human activities and enlarging the audience for our discipline."

museum STORE

Curl up with a furry friend or good book this winter!

We now carry Hansa's line of handcrafted, highly realistic plush toys representing the world's best-loved animals. Take home a river otter, wolverine or other creature.

Are you participating in the Museum's Community Book Club? Purchase the featured titles in the Museum Store. January's book is "The Absolutely True Diary of a Part-Time Indian" by Sherman Alexie.



Hours: Monday through Saturday, 10 am to 5 pm; Wednesday, 10 am to 8 pm; and Sunday, noon to 5 pm. Or shop online anytime at www.cmnh.org.

Museum Events and Programs

For tickets or reservations for Museum events, call (216) 231-1177 or 800-317-9155,

Museum Events

RACE Town Hall Meeting

This series of informal gatherings, offered in conjunction with the exhibition *RACE: Are We So Different?*, is intended to foster open communication about issues involving race and racism. **Free and open to the public with advance registration.**

Race: Where Do We Go From Here?

Wednesday, January 14

Reception 6 pm; program 7 pm

After the exhibition has concluded, join the Museum and the organizations and partners that have collaborated with it to explore the results of all of the related programming offered in conjunction with the exhibition. Learn the steps we need to take to continue the dialog in Northeast Ohio.

Groundhog Sun-day

Sunday, February 1, 1 to 4 pm

On February 2, legend has it that a groundhog can predict whether spring is near. Truth or fiction? Visit the Museum for a festival on the eve of Groundhog Day and find out. See live animals, make crafts and enjoy demonstrations all relating to the natural and unnatural history of everyone's favorite rodent, *Marmota monax*. There will even be an appearance of the soon-to-be-famous prognosticating whistlepig, Lake Erie Eddie! **Free with Museum admission.**



The Natural History of Chocolate

Saturday, February 7,

reception 6:30 pm, dinner 8 pm

Humanity's love affair with chocolate started more than 1,500 years ago in the rain forests of the Americas. Chef, author and cooking school director Bev Shaffer shares her expertise on the natural history of this treasured treat. Then enjoy a seven-course meal created by guest chef Doug Katz of fire food & drink that showcases chocolate's culinary possibilities. Katz and wine purveyor Mary Lapham will provide commentary on each course and its complementary wine. Part of the Natural History of Food Series: next events are April 18 and June 20. Seating is limited to 100 per evening. *Event Contributors: Bob Sferra, chef/owner, Culinary Occasions; Lasting Impressions Event Rentals. Tickets: \$150 per person*

Clock Day

Saturday, February 14, 10 am to 4 pm

Co-sponsored by the National Association of Watch and Clock Collectors

It's time again for Clock Day. Find your old clocks and watches and bring them to the Museum to discover if their value is real or just sentimental. Members of the NAWCC will be available to tell you what you've got and, if it isn't working, whether it's worth the effort to fix it. While you're visiting, explore the beautiful Hexter Collection of timepieces, sundials and astronomical instruments on display in the Reinberger Hall of Astronomy outside the Shafran Planetarium. **Free with Museum admission.**

Emerge: A Celebration

Saturday, February 21,

8 pm to midnight

Join us to celebrate the present accomplishments and future potential of the Museum's GreenCityBlueLake Institute. It's sure to be the green party of the year! **For ticket information, please call (216) 231-4600, ext. 3250.**

Scout Day at the Museum

Saturday, February 28, 10 am to 4 pm

Calling all Boy Scouts, Girl Scouts, Cub Scouts, Webelos and Brownies!

This is your opportunity to explore the many ways in which the Museum can benefit your scouting experience. Meet curators from many of our departments and participate in activities designed to fulfill partial badge requirements. Attend special Shafran Planetarium shows and tour the observatory. Find out about the Museum's "Badge in a Day" programs. **Wear your uniform and receive free Museum admission.**

Museum Programs

READ! SOAR! EXPLORE!

Wednesday evenings in January, 4 to 7 pm

On Wednesday evenings in January, there will be "Much to Do About Winter" while we explore great books about all the season has to offer. These family-oriented programs are held in the Museum Store. Drop in anytime between the hours indicated. For more information, visit www.cmnh.org or stop in the Museum Store. **Free with Museum admission.**

Community Book Club

Wednesday, January 21, 7 pm

Read *The Absolutely True Diary of a Part Time Indian* by Sherman Alexie. Then join a panel of high school students, librarians and others at the Museum for a lively discussion about this book. For more details, visit www.cmnh.org. **Registration required. Free with Museum admission. Admission \$5 on Wednesdays after 5 pm.**



ext. 3279, or purchase online at www.cmnh.org.

In the Shafran Planetarium

Sky shows in the Museum's 87-seat planetarium bring the wonders of the universe down to Earth. To guarantee seating, please arrive 20 minutes before show time to claim your tickets with your confirmation number. Unclaimed tickets will be released for purchase on a first-come, first-served basis 10 minutes before show time. **Tickets: Members: Free; nonmembers: \$4 per person with Museum admission. Please reserve in advance.**

Through the Viewing Glass

Monday through Friday, 2:30 pm; Wednesday, 8 pm; Saturday, 10:30 am*, 12:30, 2 and 4 pm; Sunday, 12:30, 2 and 4 pm

Four hundred years ago this year, Galileo Galilei stunned the scientific community of his day with his observations through a homebuilt telescope. Since then, astronomers have made breathtaking breakthroughs in our understanding of the cosmos with advanced telescopes on Earth and in outer space. Prepare to be astonished as we present 400 years of exciting discoveries as part of the International Year of Astronomy. * On January 3 and February 7, Star Babies is offered at this time instead of this program. See sidebar on page 12 for details.

Children's Show: Look in Here!

Saturday, 11:30 am and 3 pm; Sunday, 1:15 and 3 pm

Have you ever looked through a telescope? What can you see with binoculars on a clear winter's night? Become acquainted with the many cosmic wonders visible with more than eyes alone. Come in from the cold and be warmed by the thrill of celestial sights through binoculars and telescopes!

In the Mueller Observatory

Wednesday evenings, weather permitting, September through the end of May, 8:30 to 11 pm (arrive before 10 pm; dress for the weather). View the night skies through our 105-year-old, 10½-inch Warner & Swasey telescope. **Free with Museum admission.**

In January and February:

The winter Milky Way is not visible through the light pollution of Cleveland, but our telescope can pierce through the urban glow to reveal several gorgeous clusters of hundreds of stars. Come see the diamonds in the sky.



In-depth information about Museum exhibits is now just a phone call away!

Use your cell phone to access the Natureguide Audio Tour on your next Museum visit. Look for the audio tour symbols posted throughout the galleries. Dial (216) 453-4174 and enter the posted exhibit number, followed by the # key. Enter another exhibit number at any time. For instructions press the * key.

This service is free, but you will use your cell phone minutes while connected.



In the Smead Discovery Center

Monday through Saturday, 10 am to 4:30 pm; Wednesday, 10 am to 8 pm; Sunday, 1 to 4:30 pm. Visit the Smead Discovery Center for hands-on fun on the Museum's Lower Level. Visitors of all ages are welcome in this multigenerational space. Learn and enjoy. We have concrete activities for tots and "brain buster" puzzles for teens and adults. Check out our tree display to learn about the trees in your neighborhood. Touch a new array of colorful, sparkly rocks, minerals and shells. Welcome the return of our ocean play mat that many of you requested. Put on a health vest and wear your insides on your outside! Play a birdsong piano, touch real fossils, dig for a dinosaur and much more. Please supervise children at all times and save your snacks for The Blue Planet cafe. **Free with Museum admission.**

Special Programs

Martin Luther King Jr. Discovery Day

Monday, January 19, 10 am to 4 pm
Meet some of our curatorial staff members who study insects. They'll impress you with the diversity of the insect world and will be happy to answer any questions that are "bugging" you.

Toad Tunes and Raccoon Rhapsodies

Wednesday, January 21, 3 to 5 pm
Discovery Center Coordinator Beth Gatchell will read stories and play and sing songs about nature and science. This program is designed so you can drop in at any time during the two hours and see and hear something interesting. Bring

your voice, your dancing feet, or just your listening ears and get ready for a good time! All ages welcome.

Presidents Day Potpourri!

Monday, February 16, 10 am to 4 pm
Today will be a little bit of everything. We've amassed a variety of educational, craft projects over the years, so we will open up our cupboards and share all sorts of science and nature crafts. We'll also focus on native plants and animals. It's much easier to take care of the Earth when you know who's who and what's what! Come with your curiosity and leave with some crafts and more knowledge about the importance of native plants and animals. There will be something for everyone, so bring the whole family!



Live Animal Programs

Saturday and Sunday, 1 pm in the Museum lobby and 3 pm in the Ralph Perkins II Wildlife Center & Woods Garden. Staff and volunteers will introduce visitors to Northeast Ohio's wild creatures using live ambassadors from the Museum's Wildlife Resource Center. **Free with Museum admission.**

January:

Coping with the Cold

The bitter cold and howling winds of winter present a major survival challenge to wildlife. Migration, hibernation and changing habitats and diets are some of the strategies animals use to survive. Explore the adaptations of Ohio's wild animals that allow them to survive the sometimes brutal conditions of winter.

February:

Groundhog Shadows & 'Possum Tails

Does the groundhog really rouse itself on February 2 to seek its shadow? Does an opossum hang by its tail to sleep? Can a snake grab its tail, form a hoop and roll down a hill? We will solve these and other great mysteries of natural history in a program that focuses on wildlife myths and misconceptions.

Now you can give your little one the Sun, Moon and stars

Introducing **Star Babies** in the **Shafraan Planetarium**
Saturday, January 3 and February 7, 10:30 to 10:45 am

Star Babies is a sky show especially for children 2 and younger. It's a gentle introduction to the Shafraan Planetarium and the wonders of the night sky. Children and their favorite adult can have fun with the Sun, marvel at the Moon, find their favorite star and more!



Members: Free
Nonmembers: Adults \$2,
children free

Lectures

Explorer Series 2008-2009

The *Explorer Series* offers memorable presentations on an array of fascinating topics. Make a night of it and arrive early before each talk. Purchase food in The Blue Planet cafe, catch up with friends and family, listen to live music, enjoy the Museum's outstanding exhibitions and browse the merchandise in the Museum Store. Stay afterward for book signings by selected speakers and stargazing in the Ralph Mueller Observatory, weather permitting. Each evening begins at 5:30 pm. *Sponsored by the Museum's Women's Committee, WVIZ/WCPN ideastream, Cleveland Magazine and Cuyahoga County Public Library*



The Origin of Modern Birds: New Evidence from the Cretaceous of China

Dr. Matthew C. Lamanna, paleontologist

Friday, January 16, 7:30 pm

Modern birds (Neornithes) are today's most diverse group of land-living vertebrates. Nevertheless, their origins among their toothy, long-tailed ancestors during the Cretaceous Period remain poorly understood. Recent expeditions led by Dr. Matthew C. Lamanna, Assistant Curator of Vertebrate Paleontology at the Carnegie Museum of Natural History, and colleagues have uncovered exquisitely preserved fossils of *Gansus yumenensis*, a 115 million-year-old amphibious bird from China that, despite its great antiquity, is thought to be closely related to the Neornithes. Lamanna chronicles his team's discoveries of *Gansus* and explains its implications for the rise of modern avians.



Confronting the Climate Crisis: Not Just for Tree-huggers

Larry J. Schweiger, conservationist
Friday, February 13, 7:30 pm

In the lifetime of a child born today, 20 to 30 percent of species worldwide will face increased risk of extinction if we do not stabilize global temperatures. Larry Schweiger, president and CEO of National Wildlife Federation, reviews the urgency of the rapidly unfolding climate crisis. He discusses how NWF and others are recasting the climate crisis from an environmental issue to a societal one. He shows that by bringing new messages and messengers to the table, we can reduce global warming, pollution, recharge America's economy and protect America's natural resources.

Cleveland Archaeological Society Lecture Series

The Cleveland Archaeological Society, a local society of the Archaeological Institute of America (AIA), holds its annual lecture series at the Museum. **Free and open to the public.**

Roman Colonies in Asia Minor With a Focus on Central Turkey

Dr. Andrea De Giorgi,
Case Western Reserve University
Wednesday, February 11, 7:30 pm

The Roman *colonia* was a reflection of Rome's militaristic views and political pressures. A general blueprint for a colony embodied a scheme designed to efficiently resolve the discharge of veterans, particularly after civil wars. Dr. Andrea De Giorgi discusses how Roman colonies in Asia Minor (Turkey) generally satisfied this criterion, the variety of ways in which they did not, and what these characteristics reveal about the colonization process in southern Galatia.

Curator's Forum 2009

This lecture series showcases the work of the Collections & Research Division. New this year: Box dinners available for preorder, visit www.cmnh.org or call for details. **Tickets: Members: \$5 per lecture or \$27 for the full series; nonmembers: \$7 per lecture or \$38 for the full series. College students admitted free with valid ID.**

The Good, the Bad and the Ugly: The Status of the Mudpuppy in Some Northeast Ohio Streams

Dr. Timothy Matson, Curator of Vertebrate Zoology

Wednesday, February 25, 7 pm

TFM is a chemical that has been used to control the invasive sea lamprey in Ohio waters since 1986. Nontargeted species, including the common mudpuppy, are sensitive to TFM and often suffer high mortality during its application in rivers. Data from specimens salvaged during TFM applications and from Museum field research indicate that mudpuppies have declined within treated local streams. Dr. Timothy Matson discusses these data and the population instability and reduced stream biodiversity they imply.



Sunday

Monday

Tuesday

Wednesday

Thursday

Friday

Saturday

Groundhog Sun-day, 1 pm

Adult Field Trip, Groundhog Day Hike, 10 am

Trout Club, 4 pm
Kirtland Bird Club, Video Clips and Quiz, Bill Deiniger, 7:30 pm

Adult Field Trip, Birding in Lorain County, 9 am
Photographic Society, 10 am
Youth Program, Eye-Popping Science, 10 am
Natural History of Chocolate, 6:30 pm

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Adult Field Trip, Cleveland's Hot Winter Birds, noon

Guild of Nature Artists, 7 pm
Cleveland Archaeological Society, Roman Colonies in Asia Minor With a Focus on Central Turkey, Dr. Andrea De Giorgi, 7:30 pm
Cleveland Geological Society, 7:30 pm
Audubon Society of Greater Cleveland, A Bird's Eye View of Great Lakes Restoration, Marnie Urso, 7 pm

Explorer Series, Confronting the Climate Crisis: Not Just for Tree-huggers, Larry J. Schweiger, 7:30 pm

Clock Day, 10 am
Youth Program, Museum Trekkers & Explorers: Electricity, 10 am
Kirtlandia Society, Living in the Vermilion River Watershed, Dr. Mary Garvin, 9:30 am

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Smead Discovery Center Program, Presidents Day Potpourri, 10 am

Adult Program, Native Plants for the Home Garden, 6:30 pm

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Youth Programs, Winter Student Naturalists II, 9 am (Saturdays thru 3/7); Future Scientists, 9 am (Saturdays thru 5/16 except 3/14, 4/11, 5/2)
Adult Field Trip, Winter Blues Hike, 10 am
Emergence: A Celebration, 8 pm

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Exhibits & Shows

Kahn Hall — RACE: Are We So Different?, thru January 4
Fawick Gallery — A Passion for Nature: The Art of William E. Scheele, thru January 11
Making Faces: The Art and Science of Forensic Facial Reconstruction, opening February 28
Lower Level Gallery — Fieldwork

Museum Hours

Monday through Saturday, 10 am to 5 pm; Wednesday, 10 am to 10 pm (Observatory open 8:30 to 10 pm, weather permitting); Sunday, noon to 5 pm. Museum will be closed New Year's Day, Thursday, January 1.

Harold Terry Clark Library

Tuesday through Friday, 10 am to 2:30 pm
The Museum's non-lending research library features books and periodicals on science topics. Library hours occasionally vary. Please call ext. 3222 to confirm library staff is on duty.

Museum Store Hours

Monday through Saturday, 10 am to 5 pm; Wednesday, 10 am to 8:30 pm; Sunday, noon to 5 pm

For Visitor Information

Call (216) 231-4600 or 800-317-9155 or visit www.cmmh.org



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2009 is looking up!

This year is the International Year of Astronomy. It is a global celebration of astronomy and how it has helped society and culture worldwide.

Highlighting the year is the 400th anniversary of the first astronomical observation through a telescope by Galileo Galilei. Galileo did not invent the telescope, but he was the first to record what he saw as he looked at the Sun, Moon and planets. The insights he gathered helped to change how people carried out scientific research.

The Museum's Astronomy Department will join in the celebration with astronomical activities, special sky shows, discussions and star parties every month. Watch the Museum's Web site and future issues of *Tracks* for details.



Just for kids

Get Curious! Get Your Museum Discovery Card!

Starting in January, every child visiting the Museum can take home a free Museum Discovery Card.

Each of these trading cards is filled with facts about a Museum exhibit or topic related to our research. They also feature a special Web address that leads to more information and fun, kid-friendly activities for download on our Web site.

Throughout 2009, we'll feature the Museum's dinosaurs and other prehistoric creatures on display in Kirtland Hall of Prehistoric Life.

A new card will be featured monthly (and will only be available for that month).

Be sure to collect them all!



Upcoming Featured Creatures

January: *Triceratops horridus*

February: *Tyrannosaurus rex*