

Tracks

News from The Cleveland Museum of Natural History

Volume 37, Number 6



Uncovering Ardi

November/December 2009

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Image: © T. White, 2008

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Keeping Track with the Director

In September, the Museum's Board of Trustees elected a new president. A. Chace Anderson was selected to succeed outgoing president Nathaniel Smith, who served two terms at the Board's helm.

We are grateful for Nat's leadership and vision, which was instrumental in laying the groundwork as we embarked on an ambitious renovation and expansion planning process. We appreciate his dedication, foresight and guidance. We are also fortunate that he will continue to serve as a vice president on our Board.

I extend a warm welcome to Chace. We look forward to his leadership and direction, which will be vital in helping us move forward with this vision for our future.

A hearty congratulations to Dr. Yohannes Haile-Selassie, our curator and head of Physical Anthropology; Dr. Bruce Latimer, the Museum's former executive director; Dr. Scott Simpson, our research associate; and Dr. Linda

Spurlock, our director of human health, for their roles in an historic scientific discovery. In case you missed the headlines, these scientists helped discover, excavate, research and analyze *Ardipithecus ramidus*, a 4.4-million-year-old human ancestor. The cover of this issue of *Tracks* showcases the cover art of the October 2 special issue of the journal *Science*, which features 11 peer-reviewed papers on this hominid specimen. Impressively, our Museum researchers co-authored seven of these articles.

While we know that our curators and scientists are renowned in their fields, this international coverage reinforces that and exposes people all across the globe to their scientific expertise. We are proud of their contributions to this landmark research that is changing what we know about human evolution.

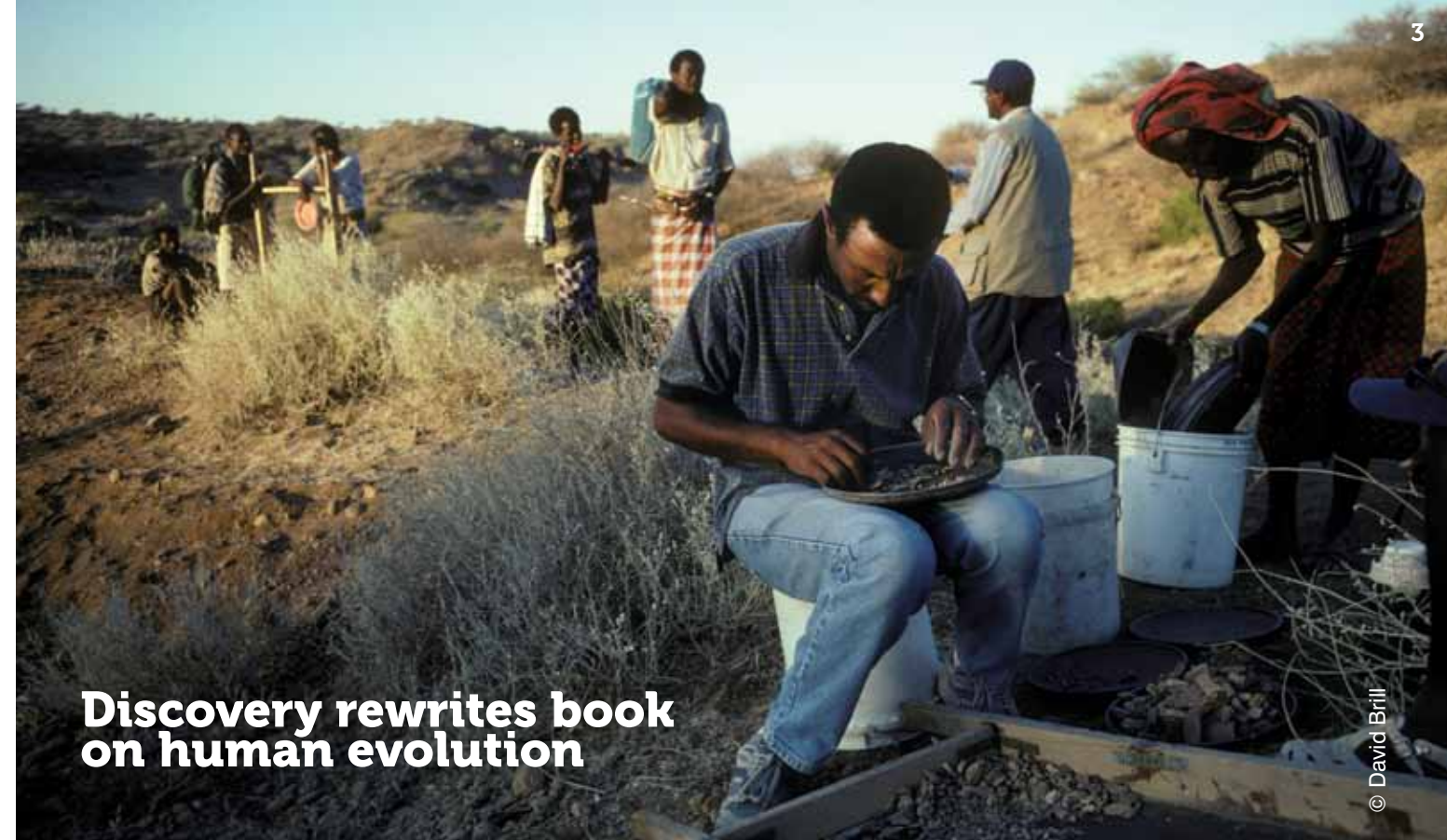
As we head into the winter months, I'd like to invite you and your family to take advantage of some of the

Museum's new programming. Our education staff has planned unique events that allow kids to have fun while learning. We've got a camp-in slated for November, a December winter holiday camp that allows children to continue learning even while they're out of the classroom and a festive New Year's at Noon! event where kids can ring in the new year with a big bang in our Shafran Planetarium.

Speaking of the new year, the Museum will celebrate a milestone in 2010. The year 2010 marks our 90th anniversary. We look forward to commemorating this anniversary with special events and programs. Stay tuned and check future issues of *Tracks* for more details.

Bonnie Cummings

Bonnie Cummings
Interim Executive Director
Chief Operating Officer



Discovery rewrites book on human evolution

© David Brill

Museum scientists were part of an international team that discovered and published new research describing the 4.4-million-year-old hominid species *Ardipithecus ramidus*. News of the discovery and its analysis made international headlines when the team's research was published in the October 2 issue of the journal *Science* (shown on the front cover of this issue of *Tracks*) as 11 peer-reviewed papers. Simultaneous news conferences in America and Ethiopia that coincided with the release of *Science*, as well as a Discovery Channel prime-time program and roundtable discussion, unveiled the research to the public.

Working in the Afar Rift of Ethiopia since 1981, the Middle Awash research team found a partial skeleton of a female human ancestor in 1994. The specimen was found by Dr. Yohannes Haile-Selassie, (pictured above) the Museum's curator and head of physical anthropology, then a graduate student at the University of California, Berkeley.

Walking in the Ethiopian desert gully looking for fossils on a hot November afternoon in 1994, Haile-Selassie spotted a bright white finger bone about 2 inches long lying on the surface of the ground. A few feet away, he found another. For the

next three field seasons, the team returned to the locality to collect the 125 crushed and fragile bones from the parched landscape.

Nicknamed "Ardi," the specimen is the earliest skeleton known from the human branch of the primate family tree. It predates the famous 3.2-million-year-old Lucy, of the species *Australopithecus afarensis*, which was found in 1974 by a team led by former Museum curator Dr. Donald Johanson.

Ardi's discovery provides new insights into human evolution. According to the research team, Ardi was approximately 4 feet tall and possessed a mix of features that enabled it to carefully climb on four limbs while in trees, and walk on two while on the ground. The researchers believe it is a species in transition.

The hominid's unique features include a flexible wrist and powerful, grasping big toes and thumbs. Its curved lower spine and the shape of its upper pelvis enabled it to walk upright. However, its flat, archless feet and protruding, thumblike big toes would have made walking long distances or running difficult. It did not possess large and fanglike canine teeth, as chimps do. Also, Ardi's arms, feet, pelvis and legs show no signs of the branch-hanging, vertical climbing and knuckle-walking abilities

found in chimp and gorilla skeletons.

The Middle Awash paleoanthropological research project was led by Dr. Tim White of the University of California, Berkeley. It includes Haile-Selassie; Dr. Bruce Latimer, former Museum executive director and currently associate professor, Case Western Reserve University, Department of Anthropology; and Museum Research Associate Dr. Scott Simpson, associate professor, Case Western Reserve University, Department of Anatomy, School of Medicine. The research team excavated Ardi and recovered key specimens of the partial skeleton, including the skull with teeth, arms, hands, pelvis, legs and feet.

Haile-Selassie co-authored two of the 11 published research papers. Latimer, a bipedalism expert, helped analyze the skeleton's foot and co-authored one of the published papers. Simpson helped analyze its wrist and hand and co-authored three of the published papers. And Dr. Linda Spurlock, the Museum's director of human health, created a sculpture reconstruction of the hominid's pelvis and co-authored one of the published papers.

To read the press backgrounder with details on the research, see photos and view some of the media coverage about the discovery, visit www.cmnh.org.

Annual MUSEUM STORE SHOPPING EVENT

Saturday, November 14

Early Bird Special:
8-10 am for 20% discount

Free admission.
No reservations or tickets necessary.

- Enjoy fresh coffee, tea, fruit juices and delicious homemade breads
- Purchase raffle tickets for handmade nature-themed trees, wreaths and swags
- Enter a drawing to win a free-range, organic turkey!
- Have your gifts wrapped with care by members of the Museum's Women's Committee

If you cannot attend the event, use this ad before the end of November for \$5 off any purchase over \$25.

Set your clocks to join us early...
to experience our annual shopping
event in a whole new way!



Fun facts about the Museum's dinosaur exhibition

The *Dinosaurs: Ancient Fossils, New Discoveries* exhibition headlining in Kahn Hall showcases some impressive dinosaur casts, a mechanical *T. rex* that walks in place, an intricate diorama of a 130-million-year-old forest and a “trophy wall” of mounted dinosaur skulls.

Organized by the American Museum of Natural History in collaboration with the Houston Museum of Natural Science, California Academy of Sciences, The Field Museum and North Carolina Museum of Natural Sciences, the exhibition reveals the cutting-edge technology that is helping scientists unravel the mysteries of dinosaurs.

Following are some interesting facts about this innovative exhibition:

- The robotic *Tyrannosaurus rex* in the exhibition is the most accurate three-dimensional representation ever of how theropod dinosaurs walked.



- A total of 50 mechanical parts were required to make each of the robotic *Tyrannosaurus rex*'s second toes flex in the subtle, curling pattern described by scientists.
- There are 463 handmade models of animals and 24 models of non-avian dinosaurs in the Liaoning Forest diorama.
- American Museum of Natural History preparators hand-painted 12,000 leaves for the trees in the Liaoning Forest diorama.
- There are 58 real fossils in the exhibition, 30 of which are dinosaurs or dinosaur parts.
- Nearly every plant and animal on display in the Liaoning Forest diorama is extinct today.
- The Liaoning Forest diorama includes models of four bird species, two extinct aquatic reptile species, three pterosaur species, three fish species, three mammal species, one species of turtle and two amphibian species.
- The trees and bushes portrayed in the Liaoning Forest diorama are based on specimens collected in the New Jersey Pine Barrens in Burlington County.

Some paleobotanists think it is the best contemporary reference on Earth today for what plant life looked like in this prehistoric forest.

- The leaves for four species of plants and trees in the diorama are made of brass for reasons of durability and ease of fabrication.
- The background for the Liaoning Forest diorama was painted on a single, flat canvas measuring 700 square feet, and later stretched to form the curved backdrop of the diorama.
- The full-size *Tyrannosaurus rex* skeleton cast breaks down into nine sections, the full-size biomechanical *Apatosaurus* model breaks down into 10 pieces, and the base of the Liaoning Forest diorama breaks down into nine sections on wheels so the entire exhibition can be transported and installed in other museums.

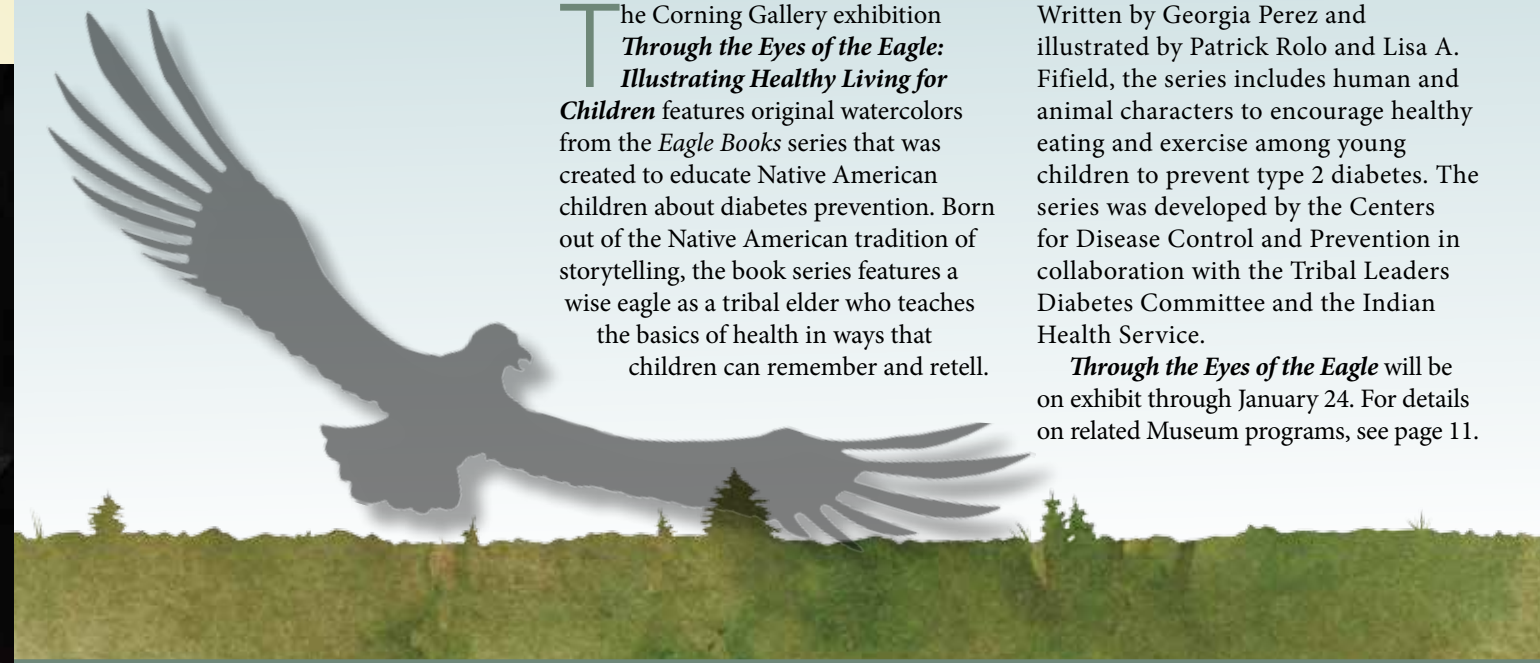
Take a modern look at the past and check out *Dinosaurs: Ancient Fossils, New Discoveries* before it closes January 31.

A colorful, healthy message

The Corning Gallery exhibition *Through the Eyes of the Eagle: Illustrating Healthy Living for Children* features original watercolors from the *Eagle Books* series that was created to educate Native American children about diabetes prevention. Born out of the Native American tradition of storytelling, the book series features a wise eagle as a tribal elder who teaches the basics of health in ways that children can remember and retell.

Written by Georgia Perez and illustrated by Patrick Rolo and Lisa A. Fifield, the series includes human and animal characters to encourage healthy eating and exercise among young children to prevent type 2 diabetes. The series was developed by the Centers for Disease Control and Prevention in collaboration with the Tribal Leaders Diabetes Committee and the Indian Health Service.

Through the Eyes of the Eagle will be on exhibit through January 24. For details on related Museum programs, see page 11.



The science behind food

Is breakfast that important? Are you eating enough fruits and vegetables? What does a healthy serving size look like? Have these questions answered and explore the world of nutrition through the interactive exhibition *Every Body Eats*.

Developed by the Oregon Museum of Science and Industry, the exhibition is designed to teach visitors the science of making healthy food choices. It features 12 hands-on interactive areas.

Highlights include the kid-friendly “Dinner Theater,” where children can

use hand puppets to act out mealtime scenarios. In the “Calories In, Calories Out” station, visitors can find out the amount of exercise needed to burn off various snacks by choosing food options and pedaling a hand cycle. The “Fuel Your Body” station lets visitors choose breakfast foods to fuel a “car”—an

analogy for the body—and then race the cars. Each car moves forward a certain distance depending on the person’s food choices.

Every Body Eats will help visitors discover how to incorporate a healthy diet into their lives. It will be on display in Fawick Gallery through January 10.



The nature of giving



Gifts with purpose

Stumped for holiday gift ideas this year? The Museum is a great source for all your holiday shopping needs, offering a variety of unique gifts to please even the hardest-to-shop-for person on your list. Plus, you won't need to worry about sizes or colors. Following is a list of seven holiday gift ideas that will let you give with meaning.

Annual Fund

A charitable donation to the Museum's Annual Fund is a gift that supports the entire Museum and its important work. Every gift contributes to our science exhibitions, educational programs, world-class research, and vital conservation, sustainability and human health projects. An Annual Fund donation can make the perfect gift when made in honor or in memory of someone special.

Natural Areas

For the outdoor enthusiast on your list, a charitable donation to the Museum's Natural Areas Program is an ideal option. For more than 50 years, this program has conserved the natural diversity of Northern Ohio, amassing a living collection of 33 nature preserves totaling nearly 4,600 acres. Your gift will help protect hundreds of rare and endangered species.

GreenCityBlueLake Institute

If you are concerned about reducing the carbon footprint of Northeast Ohio, a gift to the Museum's GreenCityBlueLake Institute will help promote more sustainable practices in land use, energy systems, transportation systems, buildings and green space.

Gift Memberships

Looking for entertainment value for the whole family? A Museum Membership provides free admission for a year to the Museum, our permanent and special exhibitions, and the Shafran Planetarium. Members receive *Tracks* newsletter, invitations to exclusive member events and tours, and discounts on lectures, classes, field trips and Museum Store purchases.

Adopt-A-Student

For the last 30 years, hundreds of scientists, environmentalists, doctors and researchers have graduated from the Kirtlandia Society Adopt-A-Student Program. Every summer, these college students work under the guidance of Museum scientists on projects that enhance their skills and could possibly launch their careers. Your gift could help fund the next Galileo, Darwin or Einstein.

Adopt-A-Wild Child

For the animal lover on your shopping list, why not adopt a Museum "wild child?" While you can't keep a fox in your family room, you can adopt one of the animals or birds that inhabit the Museum's Perkins Wildlife Center. This gift provides a certificate and photo of your "wild child." Higher adoption levels include the opportunity for a private meeting with your animal. Meanwhile, your donation helps underwrite the care and feeding of these furry and feathered Museum ambassadors.

Bequest

One special gift that you can create for you and your loved ones is a bequest to the Museum. Bequests are a type of legacy gift that continues your commitment to the Museum. They can be as simple as naming the Museum as a beneficiary in your will or life insurance policy. Your gift will be applied to the Museum's endowment fund, helping carry on the Museum's 90-year tradition of excellence in the natural sciences.

For more information about how to purchase any of these holiday gifts from the Museum, call the Development Office at (216) 231-4600, ext. 3286 or visit www.cmnh.org. Or while at the Museum, ask for gift-giving help at our Visitor Services Desk or Museum Store.

Acknowledgments

The Museum gratefully acknowledges the following gifts and grants made between July 1, 2009 and September 11, 2009.

The Tides Foundation awarded grants of \$50,000 for the GreenCityBlueLake Institute and \$50,000 for the Vision for the 21st Century project.

The **Community Foundation** of Lorain County awarded \$9,800 for health and life science outreach education for rural Lorain County schools.

A grant of \$5,000 was received from **Newell Rubbermaid's Investing in Community Program** for health and science outreach programs in Summit County schools, specifically in Mogadore, Macedonia and Fairlawn.

Dominion Resources awarded \$10,000 to develop and pilot two new programs on climate change for middle and high school students, targeting two new areas of the Museum's mission—sustainability and human health.

The **Council for Environmental Education** awarded \$3,000 to the Science Resource Center to hold a teacher workshop for the Flying WILD project.

The **Martha Holden Jennings Foundation** granted \$6,000 toward the Science and Social Studies Enrichment Program to provide students in the Cleveland Metropolitan School District with free instructed programs at the Museum.



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)

Mrs. Elizabeth Sedgwick

Linnaean Class (\$5,000-\$7,499)

Thomas and Anne Tormey

Linnaean Order (\$2,500-\$4,999)

Thomas and Kathleen Leiden

Dan and Marjorie Moore

William and Mary Weber

Linnaean Family (\$1,500-\$2,499)

Larry and Laurel Giblock

Donald and Lynda Insul

Molly Perkins

Molly and Jane Snavelly

Howard and Cara Stirn

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 Fellow (\$5,000-\$9,999)

Newell Rubbermaid, Inc.

The Nordson Corporation Foundation

Corporate Benefactor (\$2,500-\$4,999)

KeyCorp

RPM International, Inc.

A Taste of Excellence

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



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

Women's Committee benefit surpasses goal

Rendezvous with Rex, the Women's Committee party held October 9, was a roaring success. The event exceeded the committee's fundraising goal and garnered more than \$70,000 to benefit the Museum's educational programs, including the popular Explorer Lecture Series. Approximately 360 partygoers attended the casual affair, which offered a preview of the exhibition *Dinosaurs: Ancient Fossils, New Discoveries*.

The evening began with guests enjoying cocktails and hors d'oeuvres while bidding on items in the extensive silent auction. A sit-down dinner was followed by dessert and dancing.

Benefit Chair Betsy Stueber credits a team effort for the benefit's success. She acknowledges Honorary Co-chairs Amos and Samantha Crowley (pictured right), Silent Auction Co-chairs Lucy Weller and Chris Pfeil, and Women's Committee President Gail Takacs for their time and efforts that contributed to a fun evening and a great outcome.



Meet Linus

The Museum has a new animal ambassador and he's a big hit with visitors.

Linus is an adult male North American river otter. He recently joined Lucy, the popular and acrobatic female river otter, on exhibit in the outdoor Ralph Perkins II Wildlife Center & Woods Garden.

The animals were introduced slowly over several months and have now successfully bonded. The furry companions frolic, chase each other, swim together and nuzzle.

Linus escaped being sold into the fur trade when he was acquired by the Museum this past spring. Approximately 8 to 10 years old, he came from Louisiana, where otters are legally trapped and sold for their pelts.

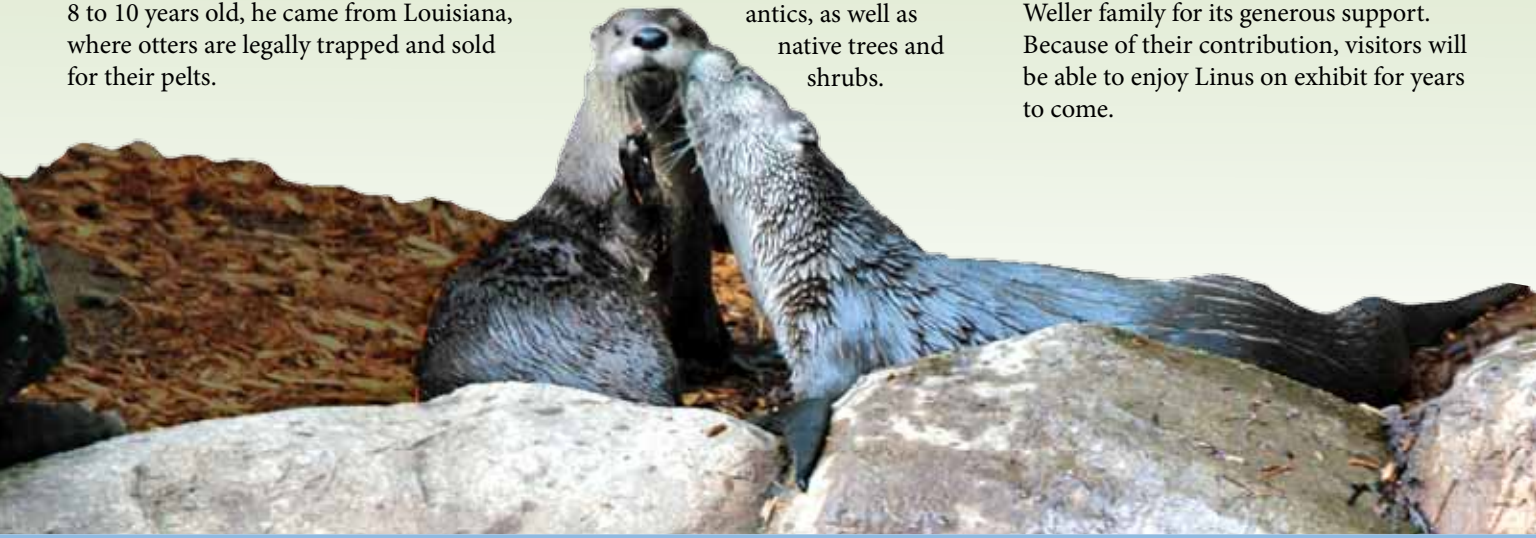
Wildlife Resources staff held a contest to name the new otter. Museum guests and Web site visitors were encouraged to cast votes online to select a name. More than 400 people voted, choosing "Linus" by an overwhelming margin over options such as Harry P. Otter, Oliver Twist and Cayenne.

Following extensive enrichment and socialization training with Wildlife staff, Linus has successfully adjusted to his new home. The otter habitat features a 6-foot-deep pool complete with waterfall, stream slide, large plate glass window where visitors can view the animals as they perform underwater antics, as well as native trees and shrubs.

Lucy was born in captivity and hand raised at a wildlife rehabilitation center in Pennsylvania. She came to the Museum in 2003, and is now 11 years old. Lucy's former companion, Travis, died two years ago from heart disease. Because otters are social creatures, staff set out to find her a new friend.

The Ralph Perkins II Wildlife Center & Woods Garden is a 2.2-acre outdoor gallery featuring native Ohio animals on exhibit in enclosures designed to resemble their natural habitats. With heated, paved pathways, the center is open year round.

The Museum gratefully thanks the Weller family for its generous support. Because of their contribution, visitors will be able to enjoy Linus on exhibit for years to come.



Making Tracks Staff news

Awards deadline

The deadline for Northern Ohio companies to submit applications for the Museum's 2010 Wellness@Work Awards Program is November 20. The awards honor local organizations for their workplace programs that promote employee health and wellness. The 2010 awards include a new Champion Award for outstanding individual achievement. For more information, visit www.cmnh.org.

Staff publications and research

Canal Fever, a new book on the Ohio and Erie Canal published by Kent State University Press, contains two articles written or co-authored by Curator of Invertebrate Paleontology **Dr. Joe Hannibal**. One of these,

"Natural history, natural resources, and the Ohio & Erie Canal," is an extended essay discussing the natural setting of the canal, the effect of the canal on the distribution of organisms and other topics. The other chapter, "A traveler's tale: along the Ohio & Erie Canal in 1834," co-written with Dr. Sabina Thomas and Dr. Michael Noll, is a shorter version of an article published earlier this year in the journal *Ohio History*. The book is available in the Museum Store.

During August, two paleobotanists visited the Museum to collaborate on research with Curator and Head of Paleobotany **Dr. Shya Chitale**. Dr. D.K. Kpagate, professor at Patel College in Bhandara, India, and Dr. Steve Manchester, curator in the Department of Paleobotany at the Florida Natural History Museum, worked with Chitale on two flowers—one inflorescence and the other fruit—which were preserved as petrified specimens collected from the Uppermost Cretaceous Deccan Intertrappean localities

from the central region of India. Manchester took Museum specimens out on loan for collaborative research at his museum that is being conducted under a National Science Foundation grant. Under this collaboration with Manchester and Chitale, a paper titled "A permineralized fruit with winged seeds from the Deccan Intertrappean Beds of Mohgaon Kalan, Madhya Pradesh, India" was presented by Kpagate before the American Botanical Society's meeting held at the end of July in Utah.

Chitale also finalized a paper with the help of Dr. Cheng Sen Li, director of the Institute of Botany, Beijing, China, and Dr. N. Awasthi, a retired paleobotanist from India who is currently a research associate in the Museum's Department of Paleobotany. The paper is on a petrified axis, now named by the three as *Huberoxylon*, after an eminent paleobotanist whose life's work focused on plants from the Devonian age.

Recognizing environmental advocates

During the sixth-annual Conservation Symposium in September, the Museum's Center for Conservation & Biodiversity presented Michael Sustin of West Geauga High School with the Museum's 2009 Conservation Education Teacher of the Year Award. Sustin received an engraved bronze wildlife statue sculpted by Larry Isard and a certificate for his school in recognition for his contributions to conservation education.



In an October awards ceremony, Biodiversity Alliance and Dominion presented their third annual Northeast Ohio Environmental Awards. The program recognizes outstanding achievements of organizations, businesses and individuals that have demonstrated a commitment to environmental excellence and leadership. The 2009 award winners were:

- COMMUNITY: Western Cuyahoga Audubon Society
- BUSINESS: The Lube Stop, Inc.
- HIGHER EDUCATION: Baldwin-Wallace College Sustainability Program
- PRIMARY/SECONDARY EDUCATION: Emmett Keller, Garrett Morgan School

Honorable Mention:

- COMMUNITY: Sea Scout Ship 41
 - BUSINESS: Buehler's Fresh Foods
 - PRIMARY/SECONDARY EDUCATION: Ruffing Montessori School
- The winners received a \$2,500 award and a plaque.

Congratulations to these individuals and organizations on their awards. Their efforts are positive examples that reinforce the Museum's mission of conservation and sustainability.

EXPLORER Series 2009-2010

Inspire your Curiosity

Join us for the 2009-2010 season of the Explorer Series. Each evening begins at 5:30 pm with live music, Museum exhibitions, shopping and raffle sign-up in the Museum Store, and food and beverages for purchase in The Blue Planet café and Museum lobby.

Afterward, select speakers will sign their books and, on clear nights, the Mueller Observatory will be open for stargazing. All programs will be held in the Museum's 500-seat Murch Auditorium.

TICKETS: Member adults \$8; member students and seniors \$7; nonmember adults \$10; nonmember students and seniors \$9. For tickets, call (216) 231-1177 or visit www.cmnh.org.

For the full Explorer Series schedule, visit www.cmnh.org.

The Explorer Series is generously supported by The Women's Committee of The Cleveland Museum of Natural History.

This season's promotional sponsors are WVIZ/WCPN ideastream, WKSU, Cleveland Magazine and Cuyahoga County Public Library.



Green Urbanism: The Global Shift Toward Sustainable and Resilient Cities

Dr. Timothy Beatley, professor of sustainable communities Friday, November 13, 7:30 pm Co-sponsored by the Cleveland Council on World Affairs

Dr. Timothy Beatley of the University of Virginia, promotes green urbanism, a creative urban planning and design strategy that brings nature back into city neighborhoods, supports locally produced renewable energy and encourages growing food close to urban communities. He will present examples of innovative green projects and policies adapted by cities in Europe and North America that could be implemented in Northeast Ohio. Book signing to follow.



Wild Mushrooms: A World of Wonder at Our Feet

Walter Sturgeon, chairman of the Ohio Mushroom Society, award-winning photographer, author and nationally recognized amateur mycologist Friday, December 4, 7:30 pm

Class of 2009 Naturalist Certificates will be awarded before this program. Walter Sturgeon is best at sorting out the dizzying array of fungi found at our feet. His presentation will emphasize mushroom diversity while highlighting ecology, folklore and edibility. Topics include insectivorous fungi, bioluminescence, habitats, symbiotic relationships, ethnomycology, mycophagy, toxicology, forms, colors, tastes, odors and hallucinogenic mushrooms.

Frontiers of Astronomy

A series of free public lectures featuring some of the latest research in astronomy. Lectures are held in the Museum's Murch Auditorium. On clear evenings, enjoy stargazing afterward in the Ralph Mueller Observatory. **No tickets or reservations required.**

Frontiers of Astronomy is sponsored by the Department of Astronomy at Case Western Reserve University through the support of the Arthur S. Holden, Sr. Endowment; The Cleveland Museum of Natural History; and The Cleveland Astronomical Society.

Planetary Nebulae and the Galactic Merry-Go-Round

Dr. Robin Ciardullo, The Pennsylvania State University
Thursday, November 12, 8 pm
Planetary nebulae have nothing to do with planets. They are the stellar equivalent of a heart attack, an event that occurs when a star like the Sun dies. They are also some of the most beautiful objects in the Universe. Dr. Robin Ciardullo will describe how planetary nebulae are created, what makes them shine the way they do and how they can be used to weigh galaxies like our own.

A Cosmological Revolution – Notes from the Field

Dr. Julio Navarro, University of Victoria, British Columbia, Canada
Thursday, December 10, 8 pm
Cosmology — the study of how the Universe began and how its structures formed and evolved — has always been at the frontier of human knowledge, seeding religions, cementing civilizations and challenging scientific thought. It is remarkable that an empirically verifiable account of the Universe's history has only emerged during the past few decades. Dr. Julio Navarro will review the observations and theories that have shaped our present cosmological paradigm, the enigmas they have uncovered and what they tell us about the fundamental laws of physics as well as the fate and origin of the Universe.

Cleveland Archaeological Society Lecture Series

The Cleveland Archaeological Society, a local chapter of the Archaeological Institute of America (AIA), holds its annual lecture series in the Museum's Murch Auditorium. Each lecture is followed by a reception. **Free and open to the public.**

Uncorking the Past: The Quest for Wine, Beer and Extreme Fermented Beverages

Dr. Patrick McGovern, University of Pennsylvania Museum of Archaeology and Anthropology
Wednesday, November 11, 7:30 pm
The history of the human species and civilization itself is, in many ways, the history of fermented beverages. Drawing upon recent archaeological discoveries, molecular and DNA sleuthing, and the texts and art of long-forgotten peoples, Dr. Patrick McGovern will take attendees on a fascinating odyssey back to the beginning when early humanoids probably enjoyed a wild fruit or honey wine. He will illustrate the biomolecular archaeological approach by describing the discovery of the most ancient, chemically attested alcoholic beverage in the world, dating back to about 7000 B.C.

Holiday CircleFest

Sunday, December 6, 1 to 5:30 pm
Get into the spirit of the season with live music and entertainment, hands-on holiday crafts and holiday shopping. Tour more than 20 University Circle museums, gardens, churches and schools during this special event. Shuttle service from site to site will be available. **Free. For more information, call (216) 791-3900 or visit www.universitycircle.org.**

Audubon Society of Greater Cleveland Program

Natural History of the Galapagos

Dr. Andy Jones, Curator of Ornithology, and Michelle Leighty, Wildlife Specialist

Wednesday, November 11, 7 pm, Classroom B

Free and open to the public

In April 2009, Dr. Andy Jones and Michelle Leighty visited the Galapagos Islands as part of a Museum-led trip. These islands were of great importance to Darwin's research in evolutionary biology. Jones and Leighty will share photos from their trip, highlighting the spectacular wildlife they encountered, including frigates, boobies, finches, sea lions, iguanas and other species. They'll also discuss the history of the islands and explain what made them a perfect natural laboratory to inspire Darwin and generations of biologists.

Cleveland Geological Society Program

The Geology of Acadia National Park (Mt. Desert Isle) and Suspect Terrane Accretion

John Ezerskis, adjunct professor of Earth Science, Cuyahoga Community College, and hydrogeologist

Wednesday, November 18, 7:30 pm, Classroom A

Free and open to the public

Museum Events

Wild and Scenic Environmental Film Festival on Tour

Friday, November 6, 6 pm reception; 7 pm film fest; 10 pm Q&A

This popular film festival brings together award-winning environmental films that will inspire and motivate viewers to help make a difference in their community and around the world. Hosted by the Nature League, the evening begins with a reception where guests can meet representatives from environmental groups and environmentally conscious businesses while enjoying music, food and a \$3 beer and wine bar. Following the films, attendees can participate in a question-and-answer session with David Beach, director of the Museum's GreenCityBlueLake Institute. Visit www.cmnh.org/site/filmfest.aspx for a complete list of the films. **Tickets: Museum members: \$10; nonmembers: \$15; high school students: \$5**

Special Lecture and Diabetes Screening What Every Adult Needs to Know About Diabetes

Thursday, November 12, 2 pm, Murch Auditorium

Tammy Randall, R.D., certified diabetes educator and director of education for the Diabetes Association of Greater Cleveland, will present this important health lecture. She will discuss what it means to have diabetes, who is at risk, how you can decrease your risk of developing type 2 diabetes and current treatment strategies. Diabetes screenings will be available following the presentation. This program is offered in conjunction with the Museum's exhibition *Through the Eyes of the Eagle: Illustrating Healthy Living for Children*. **Free with Museum admission.**

Special Lecture and Cooking Demonstration Making Good Food Better: Popular Recipes Made to American Diabetes Association Guidelines

Saturday, November 21, 1 pm, Murch Auditorium

Joan Mraz, educational program director for the American Diabetes Association, will explain how some of your family's favorite recipes can be made healthier and still taste great. Then, Kelly Martin (Chef Kels) will present a cooking demonstration to illustrate this point. A student at Beachwood High School, Martin was diagnosed with type 1 diabetes in 2005. He works in culinary arts at the Beachwood Hilton hotel and enjoys sharing his passion for cooking healthy meals with others. Martin is a 2009 Red Strider Youth Ambassador for the American Diabetes Association. The first 120 program attendees will receive a *Through the Eyes of the Eagle* book. **Free with Museum admission.**



The Natural History of Onions

Saturday, November 21

6:30 pm reception; 8 pm dinner
Enjoy the culinary versatility of the onion during this epicurean adventure. Learn about the natural history of onions from local authors, television personalities and culinary enthusiasts Fred and Linda Griffith. Then entice your palate during a seven-course gourmet meal created by guest chef Ben Bebenroth, chef and owner of Spice of Life Catering. Edward Macek of Foster's Wine Estates will provide commentary on each course's complementary wine selection. **Tickets: \$150 per person**

Mark your calendar for the entire Natural History of Food Series:

February 13, 2010 – The Natural History of Chocolate – Jonathan Sawyer, Greenhouse Tavern

April 24, 2010 – The Natural History of Balsamic Vinegar – Steve Schimoler, Crop Bistro and Bar

June 19, 2010 – The Natural History of Cherries – John Taylor, Sammy's

All four evenings: \$500 per person



Museum Events and Programs

Museum Programs

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.**

Please note: In the Shafran Planetarium, the Saturday schedule of show times will be in effect weekdays Nov. 25 and 27; Dec. 21 to 24; and Dec. 28 to 31.

The Grand Year of Astronomy

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

In 1609, Galileo pointed the newly invented telescope to the skies and beheld unexpected wonders. This year, we're celebrating his astonishing discoveries with the first-ever International Year of Astronomy. What did Galileo see? Come and find out.

* On **November 7** and **December 5**, **Star Babies** will be offered at this time instead of this program. Star Babies gives children 2 and younger a gentle, 15-minute introduction to the planetarium and the wonders of the night sky.

Children's Show:

All Telescopes Great and Small

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

The favorite tool of astronomers was invented 400 years ago. We'll see how much bigger and more powerful telescopes are now than they were back then.



In the Mueller Observatory

Wednesday evenings, weather permitting, 8:30 to 11 pm (arrive before 10 pm; dress for the weather). View the night skies through our 105-year-old, 10 1/2-inch Warner & Swasey telescope. This is the last good chance this season to see the four moons Galileo discovered swinging around Jupiter 400 years ago. While we're at it, we'll take a look at nearby Neptune. **Free with Museum admission.**

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. We have concrete activities for tots and "brain buster" puzzles for teens and adults. Play a birdsong piano, touch real fossils, dig for a dinosaur, use a microscope, and more!

Smead Discovery Center Programs

Free with Museum admission A Sustainable Solution for Plastic Toys You Don't Want to Throw Away: Donate Them!

Throughout the month of November, bring us your tired plastic (broken or intact) action figures and we'll send them to Toy Lab in Cincinnati. It's a great alternative to throwing them in the trash. At Toy Lab, kids will make new toys out of your broken action figures. You'll be able to eliminate old toy clutter, avoid a landfill, share an important conservation lesson with your kids and contribute to a youth arts and science program. Last March, the Discovery Center collected 30 pounds of plastic toys. Our new goal is 50 pounds. So we need your help! Toy Lab is a project of Happen Inc. (www.happeninc.com/toylab)

Holiday CircleFest

Sunday, December 6, 12:30 to 5 pm
Join us for hands-on activities and family fun on this festive day. Children will be able to learn about rocks and minerals and make and take a polished stone necklace. All visitors welcome!

"Totally Tubular" Crafts

Tuesday, December 22, 1 to 4:30 pm
Bring a toilet paper or paper towel tube and we'll show you some creative ways to reuse these items. Some of the ideas are artistic and others are quite practical, but all are fun.

For tickets or reservations for Museum events, call (216) 231-1177 or 800-317-9155, ext. 3279, or purchase online at www.cmnh.org.

Live Animal Programs

Staff and volunteers will introduce visitors to Northeast Ohio's wild creatures using live ambassadors from the Museum's Wildlife Resource Center. Saturday and Sunday, 1 pm in the Museum lobby and 3 pm in the Ralph Perkins II Wildlife Center & Woods Garden. Additional programs will be offered at 1:30 pm on Nov. 27 and daily from Dec. 21 to 31, except for Dec. 25. **Free with Museum admission.**

November and December: Living Dinosaurs, Reptilian Relatives and Mammals from the Mesozoic

Are dinosaurs still with us today? Real live dinosaurs! Wildlife Center staff and volunteers will explore modern-day dinosaurs and their connection to those behemoths of yesteryear. We'll also introduce visitors to modern reptiles and a mammal whose family tree goes back over 65 million years. Join us in a celebration of living dinosaurs.



Carol H. Sweet Nature Center at Mentor Marsh

Mentor Marsh is an interpretive nature preserve of the Museum and the Ohio Division of Natural Areas and Preserves. It is located at 5185 Corduroy Road, Mentor. Trails: open daily, year-round, dawn to dusk. Nature Center: open 11 am to 4 pm the first Sunday of each month during the winter season (November through March). Staff members lead hikes on these Sundays from 2 to 3:30 pm. Hikes are free with registration at rdonalds@cmnh.org or (440) 257-0777. Please dress for the weather. Hot drinks are available back at the Nature Center following winter programs.

Special Programs

November 1: Mentor Marsh Waterfowl Migratory Stop

Let's go out to Shipman Pond and its surrounding open water habitat to look for migrating waterfowl. We'll have a spotting scope and a few binoculars and field guides to lend.

December 6: Winter's Wonders

We'll hike Kerven Trail to view winter greenery in the pine forest, and then return to the Nature Center to make pinecone bird feeders.

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Go green

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To sign up for this eco-friendly edition, visit www.cmnh.org/site/SignUpforTracks.aspx.



Night at the Museum

Wouldn't it be cool to spend the night in the Museum with our dinosaurs? All you need is your sleeping bag, air mattress or cushion and you can sleep under the tail of our *T. rex* or among the animal mounts in Sears Hall. Register for our November 20 Cretaceous Critters Camp-In and help welcome some new prehistoric friends who are visiting as part of the new exhibit *Dinosaurs: Ancient Fossils, New Discoveries*. Get ready for a roaring good time. Open to members only. Children must be accompanied by an adult. Space is limited. Visit www.cmnh.org for details and registration. Sweet dreams!

Winter holiday camp

Looking for something fun to do over holiday break? Join us for our first-ever Winter Holiday Camp. Each day offers different themed programs featuring hands-on activities and a make-and-take craft, as well as a special Shafran Planetarium show. Monday, December 21 features **Dinosaurs** with a special tour of the new *Dinosaurs: Ancient Fossils, New Discoveries* exhibit. Tuesday, December 22 features **Health & Science** so we'll find out what makes your body work. Wednesday, December 23 features **Animals** and includes live animal programs and a chance to help make items used in our animal enrichment programs. Sign up for one, two or all three days. For more information, visit www.cmnh.org.

Ring in the new year with a big bang!

2010 is the Museum's 90th anniversary, and we invite you to welcome the New Year in a special way. Count down to 2010 in the Shafran Planetarium at noon with a Big Bang during our New Year's at Noon! event. Celebrate with apple juice for toasting, a light snack and noise makers. Join the party Thursday, Dec. 31 from 10 am to 1 pm. Space is limited, so register early at www.cmnh.org.

Museum Discovery Cards

Don't forget to pick up a Museum Discovery Card during your visit. Each month's card features a different prehistoric creature.



November

2009

Sunday Monday Tuesday Wednesday Thursday Friday Saturday

Exhibits & Shows

Kahn Hall – *Dinosaurs: Ancient Fossils, New Discoveries*, through January 31
Fawick Gallery – *Every Body Eats*, through January 10
Corning Gallery – *Through the Eyes of the Eagle: Illustrating Health Living for Children*, through January 24
Lower Level Gallery – *Fieldwork: The Rare and the Wonderful at Singer Lake Bog*

Kirtland Bird Club, 7:30 pm
Adult Program, Practical Sustainability:101, 7 pm

Wild & Scenic Film Festival on Tour, 6 pm

Youth Program, Fall Student Naturalists II, Grades 7-8, 9 am;
Adult Field Trip, Fish Seining, Aquatic Plants and Invertebrates at Taber Preserve, 10 am

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Audubon Society, 7 pm;
Guild of Nature Artists, 7 pm
Cleveland Archaeological Society, 7:30 pm;

Adult Field Trip, Waterfowl and Migratory Bird Species at the Ridge, 10 am;
Frontiers of Astronomy, *Planetary Nebulae and the Galactic Merry-Go-Round*, Dr. Robin Ciardullo, 8 pm

Explorer Series, *Green Urbanism: The Global Shift Toward Sustainable and Resilient Cities*, Dr. Timothy Beatley, 7:30 pm

Museum Store Shopping Event, 8 am;
Kirtlandia Society, 9:30 am;
Youth Programs, Super Science Saturday, Flights of Fancy, 10 am; Fall Student Naturalists II, Grades 7-8, 9 am;
Adult Field Trips, Fall in the Bog, 10 am;
 Think Spring! Winter Buds at the Wendtwood Preserve, 1 pm

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Cleveland Geological Society, 7:30 pm;
Trout Club, 6 pm;
Adult Program, Dinosaurs: Leave the Kids at Home, 6:30 pm

Adult Field Trip, Sandhill Crane Migration, 9 am (thru 11/20)

Parent and Preschoolers, Wild Turkeys, Tiny Trekkers, 9:30 am;
Young Explorers, 11 am;
Family Program, Cretaceous Critters Camp-In, 7 pm

Parent and Preschoolers, Wild Turkeys, Tiny Trekkers, 9:30 am;
Young Explorers, 11 am;
Youth Programs, Life Drawing at the Museum I: Perspective and Proportions, Grades 5-8, 9 am; Grades 9-12, 1 pm;
 Fall Student Naturalists II, Grades 7-8, 9 am;
Micromineral Society, 1 pm;
The Natural History of Onions, 6:30 pm

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Museum Closed

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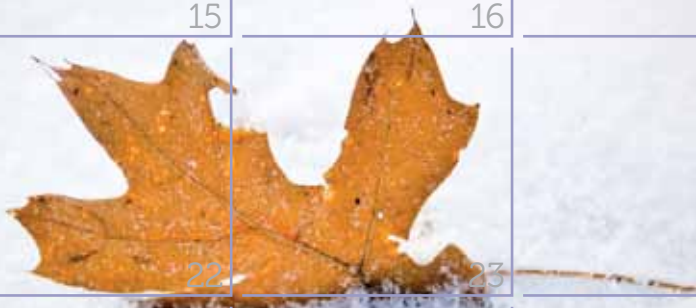
Harold Terry Clark Library

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.

For Visitor Information

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

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December

2009

Sunday Monday Tuesday Wednesday Thursday Friday Saturday

Museum Hours

Monday through Saturday, 10 am to 5 pm;
Wednesday, 10 am to 10 pm (Observatory open 8:30 to 10 pm through May, weather permitting);
Sunday, noon to 5 pm

Museum Store Hours

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

Holiday CircleFest, 1 pm

Kirtland Bird Club, 7:30 pm

Explorer Series, *Wild Mushrooms: A World of Wonder at Our Feet*, Walter Sturgeon, 7:30 pm

Family Field Trip, Hike the Dike in Winter, 9 am;
Youth Program, Play in a Day: Dinosaur Drama, 10 am;
Adult Field Trip, Wild Nature in Winter Landscapes, 10 am

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Audubon Society, 7pm;
Guild of Nature Artists, 7 pm

Adult Field Trip, Winter Ramble, 10 am;
Frontiers of Astronomy, *A Cosmological Revolution – Notes from the Field*, Dr. Julio Navarro, 8 pm

Parent and Preschoolers, Getting Ready for Winter, Tiny Trekkers, 9:30 am; Young Explorers, 11 am;

Parent and Preschoolers, Getting Ready for Winter, Tiny Trekkers, 9:30 am; Young Explorers, 11 am;
Youth Program, Life Drawing at the Museum II: Lights and Darks, Grades 5-8, 9 am; Grades 9-12, 1 pm;
Adult Field Trip, Winter Botany Jaunt, 9 am;
Kirtlandia Society, 9:30 am

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Trout Club, 6 pm;
Cleveland Geological Society, Annual Holiday Party, 7:30 pm

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Winter Holiday Camp, Dinosaurs, Grades 1-6, 9 am

Winter Holiday Camp, Health Science, Grades 1-6, 9 am;
Smead Discovery Center, "Totally Tubular" Crafts, 1 pm

Winter Holiday Camp, Animals, Grades 1-6, 9 am;

Museum Closes @ 4 pm

Museum Closed

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Family Program, New Year's at Noon!, 10 am

Museum Closes @ 4 pm

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