

Tracks




MAY - JUNE, 2011

NEWS FROM THE CLEVELAND MUSEUM OF NATURAL HISTORY

Volume 39, Number 3

BUILDING A SMARTER HOME

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A&G WALL CONSTRUCTION ISOMETRIC
SCALE: 1" = 1'-0"



PNC SmartHome Cleveland

Little Builders

Archaeology in Action

Cleveland Museum of NATURAL HISTORY



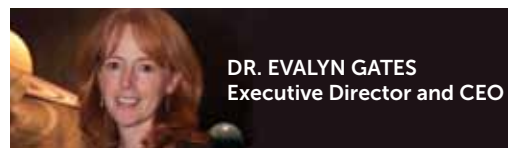
May officially marks the end of my first year at the Museum — and I've enjoyed every minute! This Museum holds many treasures, and I appreciate the opportunity to tell you about a few in each of my letters.

The word “history” implies an element of time, and natural history museums are sometimes viewed as focusing exclusively on earlier periods in time. While it's true that a visit to The Cleveland Museum of Natural History will offer many windows into the past—invitations to jump hundreds, thousands, millions and even billions of years back in time—our science and our staff also play an active role in exploring the present and the future.

A recent study published in the March issue of the *Journal of Forensic Sciences* (and highlighted in a *New York Times* article) plants the Museum and its collections squarely in the middle of a current hot topic—forensic investigations.

One of the most amazing collections in the Museum is the Hamann-Todd Collection, which contains over 3,000 well-documented human skeletons—each specimen comes with information such as height, weight, age and gender. A recent study by two external researchers used the nearly century-old bones in the collection to help with a very modern challenge—identification of missing persons and crime victims.

Forensic scientists work to reconstruct details of a crime from limited physical evidence, including skeletal remains. Bones have previously been used to estimate height, age and gender, and this new study aims to add weight to the list. By examining 121 leg bones in the collection, researchers determined that the shape of the femur is dependent on the weight of the individual—those with a higher BMI (body mass index) have a wider femur, allowing investigators to distinguish between normal and



DR. EVALYN GATES
Executive Director and CEO

overweight individuals. This information may be just what is needed to identify remains—and help solve a crime.

The Museum is also building for the future—literally! The PNC SmartHome Cleveland is under construction and on track to open the first week of June. The enthusiasm and support for this project is incredible—it is truly a community effort. We have so many wonderful partners (26 and counting) providing financial support, in-kind contributions, and countless hours of labor and expertise. Architects, artists, contractors and landscapers; foundations, corporations and individuals—an impressive group of Northeast Ohio's leaders in innovative green technologies is coming together to create the house of the future.

MAKING TRACKS

Staff news and research



Executive Director and CEO **Dr. Evalyn Gates** recently assisted a class of fourth graders at Hathaway Brown School with its creation of an Ohio Through Time Museum. She met with students, answered questions and challenged them to create a museum with interactive exhibits to teach other students at the school about prehistoric Native Americans. The Ohio Through Time Museum opened in January for one week to kindergarten through fourth grade students, their parents and faculty.



Curator of Invertebrate Paleontology **Dr. Joe Hannibal** was the lead author of “Early industrial geology of western Pennsylvania and eastern Ohio: Early gristmills and iron

furnaces west of the Alleghenies and their geologic contexts,” a chapter in the geological guidebook, *From the Shield to the Sea*, published by the Geological Society of America in March.



Gary Jackson, senior technician in the Vertebrate Paleontology Department, coauthored “The ancestral morphotype for the gnathostome pectoral fin revisited

and the placoderm condition,” a chapter in the book, *Morphology, Phylogeny and Paleobiogeography of Fossil Fishes*, published in 2010. The research presents new information on the pectoral fins in placoderms, based in part on the department's specimens.



Librarian **Wendy Wasman** presented a talk titled “Mining for Geology Information: Going Beyond Google!” to the Cleveland Geological Society in February. That month, she also presented rare

botanical books from the Museum's rare book collection at a joint program of the Native Plant Society and Northern Ohio Bibliophilic Society at Loganberry Books in Shaker Heights.



Archivist and Records Manager **Evie Newell** is searching for past issues of the Museum's annual reports. If any longtime members have copies of annual reports from 1921 to 1926 or from 1957 to 1971, contact

her at (216) 231-4600, ext. 3212, or enewell@cmnh.org.

BUILDING A SMARTER HOME

In early June, the Museum will put out the welcome mat for visitors when it opens PNC SmartHome Cleveland.

Designed to meet passive house standards, the home will be a showcase of residential green design.

PNC SmartHome Cleveland is being created using the most advanced green building techniques. Visitors can tour the home to see the latest technologies and furnishings that achieve the highest levels in energy efficient living.



The SmartHome is a temporary exhibition that was planned in conjunction with the *Climate Change* traveling exhibit that will open at the Museum in July.

The project is being funded by The Cleveland Foundation, The George B. Storer Foundation and an anonymous donor. PNC Bank is the presenting sponsor. Many organizations have supported the project with donations of labor, material and other services.



What visitors can expect to see when they tour PNC SmartHome Cleveland:

- Ideas for saving energy and money in their own homes.
- A state-of-the-art house that can weather a Cleveland winter without a conventional furnace.
- An air-source heat pump keeps the house at a comfortable temperature using the same energy as two hair dryers.
- Super-insulated walls with an insulation value of about R-50.
- Techniques for achieving an extremely well-sealed building envelope—no cold drafts!
- Industry leading, energy efficient, triple-pane windows from Germany.
- Energy recovery ventilation to provide fresh air without losing heat.
- Landscaping design that manages stormwater and utilizes native plants.
- Oak flooring recycled from a house in Cleveland Heights.
- Energy efficient and attractive lighting.
- Eco-friendly appliances from leading manufacturers.
- Water-saving kitchen and bath fixtures.
- Paints that do not release harmful chemicals.
- Furnishings made of recycled materials.
- Artwork by local artists featuring environmental themes.

Little Builders



**Little Builders will be on display
May 28 through September 11.**

EXHIBITION INVITES CHILDREN TO EXPLORE THE WORLD OF CONSTRUCTION

The youngest museum visitors can become movers and shakers when the *Little Builders* exhibition opens May 28. Donning little hard hats and construction vests, children ages 2 through 7 can create, play and learn as they explore the concepts of construction, motion and simple machines.

Visitors will have the opportunity to:

- hand-operate a pulley and conveyer belt to explore cause and effect
- operate a child-size crane to hook, lift and move objects and materials
- build structures with blocks, pipes, Duplo® blocks (toddlers' large snap-on blocks) and gears
- insert balls into air chutes and see them shoot through clear pipes to experiment with aerodynamics

The exhibit's materials and activities allow creativity to flourish. Children are encouraged to use the exhibit in their own ways, contributing to personalized learning. *Little Builders* is also a learning laboratory for parents, teachers and other care providers.

Little Builders challenges and entertains the minds of children, helping to develop intellectual, physical, emotional and social skills. It uses scientific processes, mathematical concepts, sensory development and communication to promote self-confidence, coordination, control, strength and self-expression.

The exhibit features five interactive areas:

Construction Site - In this section, visitors learn the physics of movement and cause-and-effect. They can start their workday by turning gears, and then climb in, out, over and under the four levels of the Construction Site. On the pattern wall, they can design and build a "brick" wall with large interlocking plastic blocks in a variety of sizes and colors. Visitors can also pretend to paint a wall with real painting equipment to master the craft. They can use fuzzy paint rollers and dip them into trays that are pre-coated with "paint."

Structures - Visitors discover the concepts involved in building: size, weight, shape, balance, gravity and stability, as they design and build structures. Visitors can build a mini-community on a soft carpet covered with city streets or build three-dimensional structures using a variety of PVC pipe pieces and connectors at the four-sided PVC Pipe House. They can even crawl into miniature Latch Houses and practice fine-motor skills by hooking and unhooking latches while opening and closing doors and shutters, and build pathways, houses, or anything else imaginable with soft oversized blocks.

Aerodynamics - Visitors experience and play with the characteristics of air and wind, and how they affect objects. Visitors can insert balls into vertical air chutes and watch them shoot through the clear pipes and pop into a basket. Visitors will watch in amazement as plastic balls mysteriously float, bobbing up and down, above a large orange cone. At the Bernoulli blower, they can feel the force and pressure of air by experimenting with balls and the stream of air that flows up through the hollow cone.

Cranes - Young visitors will have opportunities to discover mechanical physics at work—at the mini crane, visitors can turn a crank to operate a pulley system to raise and lower objects, use a friction brake to hold or release lifted objects, and use a set of pedals to rotate the crane on its base. Visitors can discover how the crane enables workers to move objects around the construction area and move block cargo to a waiting flatbed car using a gantry crane.

Simple Machines - Visitors can pound oversized nails, turn oversized screws, and twist oversized bolts with plastic hammers, screwdrivers and wrenches. Dropping plastic balls through a series of clear pipes, visitors will watch as the balls travel down a twisty path. Also, they can work with pipes, balls and levels to explore the fundamentals of plumbing and gravity. Visitors can work together to move materials back and forth by manipulating a hand-operated conveyer belt.



EXTREME BOOKS IN THE RARE BOOK COLLECTION

Inspired by the recent *Extreme Mammals: The Biggest, Smallest, and Most Amazing Mammals of All Time* exhibition, Wendy Wasman, librarian in the Museum's Harold T. Clark Library, unearthed some extreme examples from the Museum's 1,000-volume rare book collection. While the Museum does not own the world's largest book, which was recently unveiled at a book fair in Germany and measured six feet by nine feet, it does claim some amazing books.

Biggest: It takes at least four staff members to turn the page of the "Double Elephant Folio" edition of John James Audubon's *Birds of America*. Each of the four volumes in the set weighs between 50 to 60 pounds, and each page measures nearly 40 inches high by 30 inches wide. The "Double Elephant Folio" designation refers to the size of the paper used by Audubon to display his life-size bird engravings. The Museum's copy is one of only 110 complete bound sets in the world. The giant *Birds of America* is also the **heaviest** book in the Rare Book Collection.

Smallest: So small that it has to be stored in an envelope on the shelf, Donald K. Yeomans' 1985 book, *Comet Halley: Facts and Folly*, is only 2½ inches tall, not even 2 inches wide, and barely half an inch thick. This tiny "artist book" was hand printed, colored and bound, and is part of a limited edition of 350 copies printed at the Ampersand Workshop (the Museum's is Copy F). (Image above left.)

Oldest: At well over 300-years-old, *The Gentleman's Recreation (Hunting, Fowling, Hawking, and Fishing)*, by Nicholas Cox, is the oldest book in the Museum's collection. Published in 1697, this book was useful in its day for providing instructions for hunting and fishing.

Most Amazing Disguise: Inside the ordinary-looking, two-volume set of Alexander Smith's *Mushrooms in Their Natural Habitats* is a surprise: one volume contains the text, and the other, disguised as a book, holds stereoscopic slides with photos of mushroom specimens and a Viewmaster for viewing the illustrations. The photographs are credited to William S. Gruber,



the inventor of the Viewmaster, an invention that was introduced at the 1939 World's Fair, just 10 years before this unique treasure was published. (Image above right.)

Most Amazing Act of Camouflage: Thomas Bewick's *A General History of Quadrupeds* was originally published in 1790. The Museum's copy of the fifth edition appears to be an unremarkable book: it is not the biggest or the smallest book in the collection; it is not extremely old, and the illustrations are black-and-white woodcuts. What makes this book unique is a watercolor painting hidden under the gold-decorated edge of the book. This "fore-edge painting" can only be seen when the pages of the book are carefully fanned. (Image at top of page.)

To read more about the Museum's rare book collection and find out which generous individuals donated these particular books, visit the library blog at www.cmnh.org/site/ResearchandCollections/Library/Blog.aspx.

If you are interested in visiting the library, contact Wendy Wasman at (216) 231-4600, ext. 3222, or wwasman@cmnh.org to schedule an appointment.



SCAN QR CODE TO VISIT LIBRARY BLOG

Shop in the Museum Store during May and June and receive free gift wrapping and shipping throughout the continental U.S.! Mother's Day and Father's Day are fast approaching. Choose from unique titles or get someone closer to nature with our new hiking sticks—in senior and junior sizes.

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

**museum
STORE**

A CHANCE TO DIG INTO THE PAST



Imagine the thrill of uncovering a 2,000-year-old artifact. As a Museum member, you just might be able to do that this summer. One of the unique benefits of Museum membership is that you can participate in a real archaeological dig. Each summer, the Museum's Department of Archaeology conducts its Archaeology in Action summer field school. Museum members can sign up to join staff and volunteers for one to five weeks as they carry out field research. Participants will learn the basic techniques of excavation and data recording.

This season, Museum archaeologists will return to the Heckleman site, a prehistoric Native American settlement near Milan, Ohio. The team investigated this site over the 2009 and 2010 field seasons. The results of these investigations have provided valuable

information about the pre-European contact Native American settlement of north-central Ohio. The findings also underscore the scientific importance of this archaeological locality. To date, Museum archaeologists have identified and mapped the remains of an oval-shaped earthwork that measures 150 feet in length.

"The nature of this 2,300 year-old earthwork became clearer during the 2010 field season when the remains of two large, possibly ceremonial, posts and an exceptionally large fire pit were discovered within the enclosure," said Dr. Brian Redmond, curator and head of archaeology. "The lack of evidence for the building of houses in this same area may indicate that the purpose of this enclosure was not to defend a small village but rather to demarcate a space for

ceremonies, feasting and other kinds of social activities."

The team uncovered additional evidence of Hopewell culture peoples (circa 100 BC to AD 400) in the form of small cooking or storage pits containing the distinctive bladelets of Flint Ridge chert from near Newark, Ohio, as well as finely-made pottery. The presence of this Middle Woodland cultural group at the Heckleman site remains to be explained. In addition, the discovery of post molds representing a defensive stockade that overlapped and post-dated the oval enclosure documents the presence of a late period village site that occupied a portion of the terrace overlooking the Huron River.

The Heckleman Site Archaeological Project received generous support from the Albert G. & Olive H. Schlink Foundation, the Laub Foundation, and the Cleveland Archaeological Society.



Results of the Heckleman project over the last two years are detailed in the Museum's archaeology blog at www.cmnh.org/site/ResearchandCollections/Archaeology/BloggingArchaeology.aspx.

To participate in the Archaeology in Action program, Museum members do not need to have experience. A minimum age of 17 is required. Cost is \$200 per week. For an application, visit www.cmnh.org/site/ArchaeologyinAction.aspx.

To view a video interview produced by Cool Cleveland featuring Dr. Redmond regarding the Heckleman project, visit www2.coolcleveland.com/blog/2011/03/video-archeology-in-action.



CREATING AN URBAN OASIS

The Museum's Natural Areas Division has been at the forefront of a unique collaboration that revitalizes urban neighborhoods. The Earth Day Coalition's NatureHood project is a collaborative effort with Cleveland residents, nonprofit and government organizations and area businesses. NatureHood restores and improves green spaces by creating native plant naturoscapes on vacant and abandoned properties in the city of Cleveland.

In bringing native landscapes to some of the nearly 3,000 acres of vacant land in the city, NatureHood expands urban green spaces, restores natural habitats and greens city neighborhoods. These restorations also decrease the city's maintenance costs by eliminating mowing.

NatureHood organizers work with community development corporations to select vacant lots located in

neighborhoods where residents have interest in the project and in gardening. NatureHood volunteers assist residents with planning, provide manual labor and supply plant stock to establish the native plant garden. They then leave the garden under the care of the community to manage and enjoy.

So far, NatureHood has created two native plant gardens. One is in the Tremont neighborhood near Steelyard Commons. Here, more than 700 native plants were planted and a brick path and interpretive

signage were installed. Another large garden was created in the Stockyards neighborhood that spans two city blocks.

Work has begun on two additional gardens in the Mount Pleasant neighborhood on the city's east side. The NatureHood team will bring these gardens to life in early May and June. To find out more about the project, visit the NatureHood Facebook page or contact Garrett Ormiston in the Natural Areas Division at (216) 231-4600, ext. 3352.



WINNING WORKPLACES

The Museum honored 10 local businesses for their workplace wellness initiatives in March when it presented its third annual Wellness@Work Awards. Representatives from the winning companies were recognized during an awards dinner held at the InterContinental Hotel Cleveland.

A total of 28 Northeast Ohio companies applied for the awards. Companies were judged based on their programs to improve their employees' health, work/personal life balance, education, quality of life and sustainability in the workplace. Congratulations to the 2011 Wellness@Work Award winners:

GRAND PRIZE WINNERS:

Small-Mid Size Business:

..... **Main Street Gourmet**

Large-Conglomerate Size Business:

..... **Fairmount Minerals**



COSE Small Business Division

First Place: . . **Columbia Chemical Corp.**

Second Place: . . **Noble-Davis Consulting**

Third Place: **ERC**

Category Two (101 to 250 employees):

First Place: **Main Street Gourmet**

Category Three (251 to 1,000 employees):

First Place: **Fairmount Minerals**

Second Place: . . **Avon Lake City Schools**

Third Place: **Nestle USA-Prepared Foods**

Category Four (more than 1,000 employees):

First Place: **Sterling Jewelers Inc.**

Second Place: . . . **Cuyhoga Metropolitan**

Housing Authority

Third Place: **Cuyahoga County**



WELLNESS@WORK SYMPOSIUM

The Museum will host a Wellness@Work Symposium Tuesday, June 7, 2011, at the Museum. Sponsored by Gallagher Benefit Services, Inc. (formerly Herbruck Alder), the symposium will provide an opportunity for companies to learn from each other and wellness experts about strategies to improve employee well-being. Organizations considering creating an employee wellness program are also encouraged to attend. For details, visit www.cmnh.org/site/Wellness.aspx.

The 2011 Wellness@Work Awards were sponsored by COSE, Inside Business magazine and Medical Mutual of Ohio. Organizational Consulting Group, Ratliff & Taylor and Sibson Consulting were collaborating partners.

ACKNOWLEDGMENTS

The Museum gratefully acknowledges the following gifts and grants made from **January 1, 2011 through March 4, 2011.**

The George Garretson Wade Charitable Trust contributed \$15,000 to the 2010-2011 Annual Fund and \$10,000 to the Vision for the 21st Century capital campaign.

Dr. Michael Ryan, Curator of Vertebrate Paleontology, received a grant of \$17,500 from the **National Geographic Society** for his fieldwork in the Gobi Desert.

The **Change Happens Foundation** is supporting the *Climate Change* exhibition with a grant of \$10,000.

Fairmount Minerals established an Endowed Design Innovation Fund for the GreenCityBlueLake Institute with a contribution of \$100,000.

The **Enterprise Holdings Foundation** is supporting free tuitions for Cleveland Metropolitan School District classes with a grant of \$2,500.

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

Linnaean Kingdom (\$10,000 and above)

Aniruddha Chitaley
William and Laura Hlavin
Miriam Greek Smead
Mrs. Clare Walker

Linnaean Phylum (\$7,500-\$9,999)

C. W. Eliot and Linda Paine
Heinz and Elizabeth Wolf

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

James and Angela Hambrick
Edward and Catherine Lozick
Dan and Marjorie Moore

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

William and Mary Conway
Mike and Lisa Hawkins
Mike Johnson and Ho Yung Byrin
Robert and Jean Mathews
S. Sterling and Judith McMillan
Thomas and Katharine Morley
Creighton and Janice Murch

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

William and Barbara Coleman
Richard and Mary Fratianne
Richard and Priscilla Garretson
Albert Hanes and Robert Hanes
A. Malachi and Barbara Mixon
Bert L. Szabo
Connie White

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

Corporate Eagle (\$50,000 and above)

Fairmount Minerals Ltd.

Corporate Heron (\$10,000-\$24,999)

Bass Energy, Inc.
Medical Mutual of Ohio

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

Novartis International AG

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

Enterprise Holdings Foundation
Tragus Environmental Consulting Inc.
TransMedics, Inc.

Corporate Contributor (\$1,000-\$1,499)

Ohio CAT

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

BE A PART OF *Natural History*

Inspiration is at the core of the Museum's mission. The Museum's staff and volunteers spark inspiration every day through science and education.

Contributing a gift this spring to the Museum's Annual Fund will help support this important work and help reach a goal of \$1 million. All donors who contribute \$90 or more before June 30, 2011, will be invited to a special behind-the-scenes appreciation event at the Museum. To contribute to the Annual Fund, call (216) 231-4600, ext. 3286, or visit www.cmnh.org.

Save the Date!

**Donors Behind-the-Scenes Evening
Thursday, September 15, 2011**

Dr. N'omi Greber, Curator of Archaeology, *High Banks at dawn*

MUSEUM EVENTS AND PROGRAMS

BE CURIOUS EXPLORER LECTURES

Biophilia: The Human Need for Nature

Dr. Stephen R. Kellert, ecologist
Friday, May 20, 7:30 pm



Dr. Stephen Kellert, Tweedy Ordway professor emeritus, senior research scholar at Yale University's School of Forestry and Studies, will explore the role of natural systems in human biology and culture by reviewing the

theory of biophilia. He will describe how this hypothesized inherent need to affiliate with nature is influenced by experience, learning and culture. He will examine how children's experience of nature is an essential component of maturation, and discuss the rapid decline in children's contact with natural systems. He will consider the notion of "biophilic design" as a strategy for creating positive connections between people and nature.

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.

The Explorer Series is generously supported by the Museum's Women's Committee.

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



CURATOR'S FORUM

This lecture series showcases the work of the Collections & Research Division. Coffee and cookies will be served after each lecture. Stay and chat with members of the Museum's scientific staff. Box dinners will be available for preorder for \$9; visit www.cmnh.org or call for details. Tickets: Members \$6 per lecture; nonmembers: \$8 per lecture. College students admitted free with valid ID.

The Discovery and Interpretation of "Kadanuumuu"

Wednesday, May 18, 7 pm

DR. YOHANNES
HAILE-SELASSIE



Curator of Physical Anthropology

Since the early 1970s, the discovery of "Lucy" and her relatives established *Australopithecus afarensis* as the earliest known human ancestor, at 3 to 3.4 million years old. The skeletal morphology and size of this species was well understood, largely based on "Lucy's" partial skeleton. The discovery of "Kadanuumuu" at the Woranso-Mille site in Ethiopia changed this. At 400,000 years older than "Lucy," "Kadanuumuu" and his remains represent the oldest partial skeleton assigned to *Australopithecus afarensis*. Dr. Yohannes Haile-Selassie will explain what new data "Kadanuumuu" has yielded, showing that advanced human-like walking is older than previously thought.

Investigating Historic Millstones along the Cuyahoga and Other Streams of the Western Reserve

Wednesday, May 25, 7 pm



DR. JOE
HANNIBAL

Curator of Invertebrate Paleontology

Dr. Hannibal will chronicle the multidisciplinary investigation of historic millstones in the Western Reserve. Find out how the Mineralogy and Invertebrate Paleontology departments have collaborated in locating these millstones, figuring out when they were used, and determining what kind of rock they were made from, ranging from local bedrock and glacial material to stone imported all the way from France. This talk is part of the Summer of History 2011, a program involving museums throughout northeastern Ohio.

BEAMAZED

MUSEUM EVENTS AND PROGRAMS

LECTURES

KIRTLANDIA SOCIETY LECTURES

Saturdays, 9:30 am coffee and conversation; 10 am program Rare Book Room.

Free and open to the public.

May 14 - Midges and Mayflies: What They Tell Us About Lake Erie
Kenneth A. Krieger, Ph.D., Director, National Center for Water Quality Research and Professor of Biology, Heidelberg University

June 18 - Cleveland Metroparks Zoo: Past, Present and Future
Steve H. Taylor, Director, Cleveland Metroparks Zoo



KIRTLAND BIRD CLUB Birdsong Ear Training Techniques: Sorting out the Singers in the Chorus!

Wednesday, May 4, 7:30 pm,
Classroom A

Dr. Lisa Rainsong, Cleveland
Institute of Music

Learning bird songs can feel a little overwhelming at times—especially in May! Bird song is music, and the techniques used in ear training and music appreciation classes can provide valuable tools for identification of avian musicians and their repertoire. Dr. Lisa Rainsong will help you sort out the singers and their songs through an approach that can be applied to many of the birds we hear.

eBird: Good for the Birds, Good for You

Wednesday, June 1, 7:30 pm,
Classroom A

Ken Ostermiller, Avid Birder
eBird, a real-time, online checklist program, can help you keep track of birds you have seen and show you where other birders have found the birds you want to see. eBird is a citizen science project of the Cornell Lab of Ornithology and the National Audubon Society. Includes a demonstration of the eBird Web site to show how eBird can help birders.

CLEVELAND ARCHAEOLOGICAL SOCIETY LECTURE SERIES

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

A Complete Cosmos: The Tomb of an Egyptian Governor and Its Secrets

Dr. Lawrence Berman, Museum of
Fine Arts, Boston

Wednesday, May 11, 7:30 pm

In April 1915, the Harvard University-Boston Museum of Fine Arts Expedition discovered the tomb of Governor Djehutynakht and his wife in Middle Egypt. The contents of this early twelfth dynasty tomb include well-known masterpieces of Egyptian art like the outer coffin of Governor Djehutynakht—widely regarded as the finest Middle Kingdom coffin in existence—as well as the largest collection of wooden models ever found in one tomb. Together, the paintings, texts and pictures tell us about the world of the Djehutynakhts and their peers, and how they perceived their place in the cosmos.

MUSEUM EVENTS

Astronomy Day

Saturday, May 7, 10 am to 4 pm

Come celebrate National Astronomy Day at the Museum. Learn about the Universe through demonstrations, exhibits and hands-on activities for the whole family. Activities include shows in the Shafran Planetarium and tours of the Ralph Mueller Observatory. Local astronomy clubs will be on hand to share the wonders of the sky. In the Smead Discovery Center, kids can make a sundial and chalk a dot-to-dot constellation. **Free with Museum admission.**

Parade the Circle

Saturday, June 11, 11 am to 4 pm

Enjoy entertainment, food and activities provided by more than 20 cultural institutions on Wade Oval at the 22nd annual parade. This year's theme is "Voices Among Voices."

The parade starts at noon. Kids can enjoy hands-on activities and crafts along the parade route. For details, maps and directions, visit www.universitycircle.org.

Volunteer Appreciation Night

Tuesday, June 14

Reception 5:30 pm; dinner 6 pm;
awards 7 pm

A special invitation to the Museum's many dedicated volunteers: Join us for this evening devoted to you! Celebrate while enjoying food and friendship with your fellow colleagues. Watch for your printed invitation or contact Donna Brant at (216) 231-4600, ext. 3252, or dbrant@cmnh.org.

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

Wade Oval Wednesdays

Wednesdays, June 15 through August 31, 6 to 9 pm

University Circle's free summer concert series presents an array of top musical entertainment. Come to the Circle to enjoy music, food and browse an array of local vendors. For more information, visit www.universitycircle.org.

The Nature League's Annual UnNatural Affair Celebration

Friday, June 17, 6 to 10 pm

Join us for this popular summer party on the Museum's Observatory deck. Enjoy fabulous cuisine, music and dancing, plus a free drink ticket. Tour the Observatory, which houses a 10 1/2-inch refracting telescope built by the Warner & Swasey Co. of Cleveland in 1899. Enter a raffle to win great prizes. **Tickets: Nature League members: \$15; nonmembers \$20.**

The Natural History of Melons

Saturday, June 25; 6:30 pm reception; 8 pm dinner

This dining adventure allows guests to enjoy the sweet flavors of melons. Join guest chef Pete Joyce of Bistro on Lincoln Park for an evening celebrating these succulent fruits. Each of the seven courses will be paired with wine selections. A special guest speaker will share the history of these seasonal delights. **Tickets: \$150 per person.**

Natural Areas Wine Tours Wine tastings with a wild side

Co-sponsored by Ohio Wine Producers Association

Explore Northern Ohio's wild beauty and its local wineries through these unique wine tours. Each date offers a naturalist-led hike on a Museum preserve followed by a wine-tasting opportunity at a local winery. Bring your enthusiasm for the great outdoors, good wine and good company. Natural areas tours will start at 10 am and end around noon. Afterward, participants will travel to the designated winery for a light lunch and wine tasting. Space is limited. **Cost \$35 per person per trip.**

Tour dates and locations

May 28 - North Kingsville Sand Barrens/Markko Vineyard (Conneaut, OH)

July 23 - Burkholder Preserve/St. Joseph Vineyard (Thompson, OH)

September 24 - Groves Woods/LaLeure Winery (Parkman, OH)

October 15 - Cathedral Woods/Buccia Vineyards (North Kingsville, OH)

MUSEUM PROGRAMS

IN THE SHAFRAN PLANETARIUM

An out-of-this-world experience featuring the latest in technology!

Be amazed at our live shows in the new and improved Nathan and Fannye Planetarium. Experience our new, state-of-the-art digital projection system. Offering enhanced special effects, full-dome coverage and high-definition imagery, the technology allows Museum astronomers to present more detailed sky shows that take visitors on virtual trips throughout the Universe and beyond.

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.**

Old, Older, Oldest

How old is that rock? That planet, those stars, this galaxy? And how about the Universe? We'll explore the dating techniques of astronomers.

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

*On May 7 and June 4, "Star Babies" will be offered at this time instead. Star Babies gives children 2 and younger a gentle, 15-minute introduction to the planetarium and the wonders of the night sky.

Children's program: Stars in the Cradle

Stars don't just pop out of nowhere. They are born in beautiful clouds of gas and dust in space called nebulae. Let's catch a glimpse of star nurseries.

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

In the Mueller Observatory

View the night skies through our vintage, 10 1/2-inch Warner & Swasey telescope. Wednesday evenings, weather permitting, through the end of May, 8:30 to 11 pm (arrive before 10 pm; dress for the weather). May is the last opportunity this year to see gorgeous Saturn and its spectacular icy rings. We'll catch a few of Saturn's moons, too!



MUSEUM EVENTS AND PROGRAMS

SMEAD DISCOVERY CENTER

Monday through Saturday, 10 am to 4:30 pm; Wednesday, 10 am to 8 pm; Sunday, 1 to 4:30 pm.

Free with Museum admission.

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!

Astronomy Day

Saturday, May 7, 10 am to 4 pm

The Discovery Center will join in the astronomical festivities on this day. Make your own sundial and chalk some constellations.

Toad Tunes and Raccoon Rhapsodies:

Wednesday, May 18, 3:30 to 5 pm

Discovery Center Coordinator Beth Gatchell will read stories, play guitar and sing songs about nature and science. This program is designed so you can drop in at any time during the listed 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.

Summer Show and Tell

Wednesdays in the Smead Discovery Center

Bring your family and your questions and get ready for hands-on fun. Stay as little or as long as you like. Each week will feature a special activity or craft and a resource person who will make science fun and understandable for visitors of all ages. They will SHOW you and TELL you about . . .

Fossils: Dinosaurs and Sharks

Wednesday, June 29, 2:30 to 4:30 pm

The Museum has a great collection of dinosaurs, but did you also know we have a great collection of fossil sharks and fossil fish? Scientists from all over the world seek casts or copies of our fossil fish made by David Chapman, casting lab technician. Come ask him and volunteer Joe Klunder what's so special about the Museum's fossil dinosaurs and fish. Then examine the real thing. Activity: Explore the remains of ancient sea beds for shark and ray teeth.

LIVE ANIMAL PROGRAMS

Wildlife Center staff and volunteers will introduce visitors to Northeast Ohio's wild creatures using live ambassadors from the Museum's animal teaching corps. Saturday and Sunday, 1 pm in Sears Hall of Human Ecology and 3 pm in the Ralph Perkins II Wildlife Center & Woods Garden. **Starting June 13:** Monday through Friday, 1:30 pm in Sears Hall.

Free with Museum admission.

May and June: Wildlife in our Big Backyard

Are there hares in your hedges? Raccoons on your rooftop? Owls in your outback? Turkeys in your tulips?

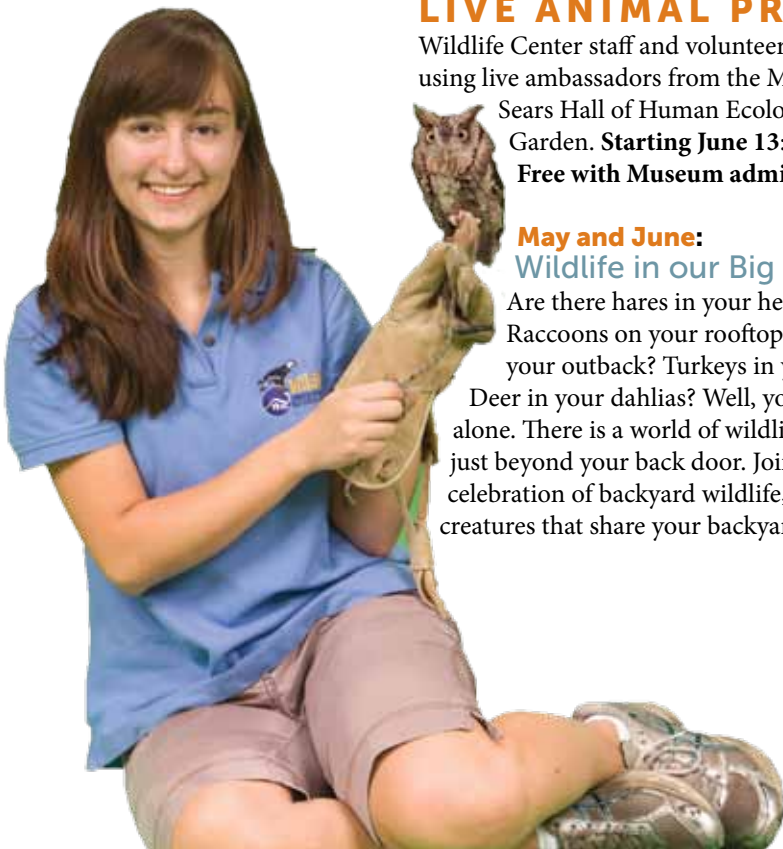
Deer in your dahlias? Well, you are not alone. There is a world of wildlife that lives just beyond your back door. Join us in a celebration of backyard wildlife, the wild creatures that share your backyard, our

backyard and everybody's backyard here in this part of the world. Along the way, we'll explore the special attributes of Ohio's wildlife and the special places that sustain them. Come join us. It's wild out there!

Go greener

Subscribe now to receive *Tracks* in digital format. By receiving the newsletter electronically, you can help eliminate paper waste and join our efforts to be more sustainable.

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



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



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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 are open daily, year-round, dawn to dusk. The Nature Center is open on Saturdays and Sundays from noon to 5 pm. **Family nature programs and guided hikes are offered from 2:30 to 3:30 pm every Sunday.** There is no charge, and all are welcome. Programs will be held in all but severe weather; so please come prepared for the conditions. Bring your own field guides and binoculars if you have them or we will have some to lend. Reservations are requested. To register or for more information, contact the Nature Center at: (440) 257-0777, by mail at 5185 Corduroy Rd., Mentor, OH 44060, or e-mail rdonalds@cmnh.org.

Sundays

May 1: Bald Eagle Open House

Celebrate these mighty birds with activities from noon to 5 pm at the Nature Center. Help build a mock eagle nest and hold a replica skull in your hands! Meet at the Nature Center at 2 pm for a guided hike to see a bald eagle nest. This two-mile round-trip hike is on an unimproved and sometimes muddy trail, so be prepared for trail and weather conditions.

May 8: Happy Mother's Day!

Join us for a special walk in nature with Mom. We'll search for signs of spring, keep an eye out for colorful migrating birds and look for spring flowers.

May 15: Spring Migration Madness

Want to see some of the colorful birds migrating through Northeast Ohio this spring? Join us for a walk through field, forest and along water's edge as we look and listen for our spring beauties. Beginning birders welcome!

May 22: Naturalist's Choice

Come join our naturalist on a hike and learn what's going on seasonally around the marsh.

May 29: Lagoons Hike

Meet at the Mentor Lagoons City Nature Preserve trailhead (8365 Harbor Dr.) for a walk at the western edge of the marsh.

June 5: Celebrate National Trails Day® at Mentor Marsh!

Help us take part in the long-standing celebration of America's magnificent trail system and its countless supporters

and volunteers. Help us "spruce" up our section of the Buckeye Trail. Tools provided; wear sturdy footwear and bring work gloves. Co-sponsored with the Buckeye Trail Association.

June 12: Oh, Deer!

What are deer exclosures and what is their purpose? Let's hike to one of these fenced areas at the marsh and discover what's growing out of reach of deer.

June 19: Happy Father's Day!

Let's get out and explore with Dad. We'll turn over rocks and logs in the upland forest around the marsh and see what we can discover.

June 26: Lagoons Hike

Meet at the Mentor Lagoons City Nature Preserve trailhead (8365 Harbor Dr.) for a walk at the western edge of the marsh.

Sunday

Monday

Tuesday

Wednesday

Thursday

Friday

Saturday

Mentor Marsh Program, Bald Eagle Open House, 2:30 pm

1

Mentor Marsh Program, Happy Mother's Day! 2:30 pm

8

Mentor Marsh Program, Spring Migration Madness, 2:30 pm

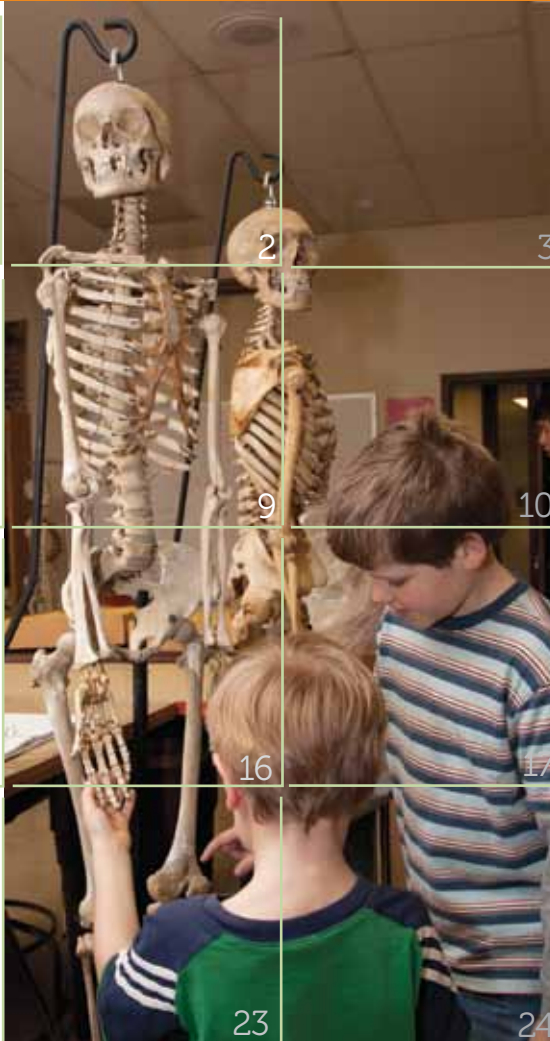
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Adult Program, Back to Basics: Mushrooms and Slime Molds, 9 am; Mentor Marsh Program, Naturalist's Choice, 2:30 pm

22

Mentor Marsh Program, Lagoons Hike, 2:30 pm

29



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24

Memorial Day, MUSEUM CLOSED

30

Kirtland Bird Club, 7:30 pm

4

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

11

Adult Field Trip, Migration: East Harbor and Kelleys Island, 8 am (thru 5/19); Smead Discovery Center Program, Toad Tunes and Raccoon Rhapsodies, 3:30 pm; Adult Program, Back to Basics: Mushrooms and Slime Molds, 6 pm; Curator's Forum, The Discovery and Interpretation of 'Kadanuumuu,' Dr. Yohannes Haile-Selassie, 7 pm; Geological Society, 7:30 pm

18

Curator's Forum, Investigating Historic Millstones Along the Cuyahoga and Other Streams of the Western Reserve, Dr. Joe Hannibal, 7 pm; Guild of Nature Artists, 7 pm

25

Museum Hours

Monday through Saturday, 10 am to 5 pm; Wednesday, 10 am to 10 pm (Observatory open 8:30 pm to 11 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 10 pm; Sunday, noon to 5 pm

Harold Terry Clark Library

Monday 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.

Adult Field Trip, Look Down for Shooting Stars? 8 am; Target Free First Thursday, 1 pm

5

Adult Field Trip, Big Day: Spring Migration, 6 am

12

Adult Field Trip, Celebrate Endangered Species Day, 9 am; Parent & Preschoolers, Tiny Trekkers, Birds, 9:30 am; Explorer Series Lecture, Biophilia: The Human Need for Nature, 7:30 pm

19

26

Youth Program, Spring Future Scientists, 9 am; Adult Field Trip, Garlic Mustard Pull at the Taber Preserve, 10 am; Family Program, Astronomy Day, 10 am; Smead Discovery Center Program, Astronomy Day, 10 am; Youth Program, Star Babies, 10:30 am

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Adult Program, Back to Basics: Local Flora, 9 am; Youth Program, Spring Future Scientists, 9 am; Kirtlandia Society, Midges and Mayflies: What They Tell Us About Lake Erie, 9:30 am; Youth Programs, Super Science Saturdays, Prehistoric Bling, 10 am; Adult field Trip, Spring Wildflower Hike, 10 am

13

14

Adult Field Trip, Lupine at the Barrens, 10 am

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21

Natural Areas Wine Tour, 10 am; Micromineral Society, 1 pm

27

28

Sunday

Monday

Tuesday

Wednesday

Thursday

Friday

Saturday

Exhibits & Shows

PNC SmartHome Cleveland, early June through September, 2011
Fawick Gallery – Let's Get Active, through May 8; *Little Builders*, May 28 through September 11
 Lower Level Gallery – *Fieldwork: Soldiers' & Sailors' Monument*, through Spring 2012

For Visitor Information

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

Adult Field Trip, Jewels of the Cuyahoga, 9 am;
Mentor Marsh Program, National Trails Day*, 2:30 pm

5

Mentor Marsh Program, Oh, Deer! 2:30 pm

12

Mentor Marsh Program, Happy Father's Day! 2:30 pm

19

Mentor Marsh Program, Lagoons Hike, 2:30 pm

26

6

Youth Camp, Pre-Med Camp: Health vs. Wild, 9 am (thru 6/17);
Youth Camp, Circle Sampler Camp, Session I, 9 am (thru 6/17)

13

Youth Program, Future Scientists: Acadia National Park Camping Adventure, 7:30 am (through 6/29);
Youth Camp, Pre-Med Camp: Health vs. Wild, 9 am (thru 6/24);
Youth Camp, Circle Sampler Camp, Session II, 9 am (thru 6/24)

20

Youth Camp, Junior Medical Camp*, 9 am (thru 7/1);
Youth Camp, Circle Sampler Camp, Session III, 9 am (thru 7/1)

27

Wellness@Work Symposium, 8 am

7

Volunteer Appreciation Night, 5:30 pm

14

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Kirtland Bird Club, 7:30 pm

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Guild of Nature Artists, 7 pm

8

Wade Oval Wednesday, 6 pm;
Geological Society, 7:30 pm

15

Wade Oval Wednesday, 6 pm;
Adult Program, Shade Gardening Using Native Woodland Plants, 7 pm;
Guild of Nature Artists, 7 pm

22

Smead Discovery Center Program, Summer Show & Tell: *Fossils Dinosaurs and Sharks*, 2:30 pm;
Wade Oval Wednesday, 6 pm

29

Target Free First Thursday, 1 pm

2

9

16

23

Adult Field Trip, Cedar Bog State Nature Preserve, 8 am (thru 7/1)

30

Adult Field Trip, Taber Preserve, 10 am

3

Adult Field Trip, Rare Lepidoptera, Birds, Insects and Plants of Singer Lake Bog, 10 am

10

Adult Field Trip, Summer at Sawdust, 10 am;
Family Program, The Nature Team: Sunset Float on Hinckley Lake, 6:30 pm

17

Parent & Preschoolers, Tiny Trekkers, *Butterflies*, 9:30 am;
Adult Field Trip, Cemeteries and Nature, 10 am

24

Youth Program, *Star Babies*, 10:30 am

4

Adult Field Trip, Annual Grand River Terraces, 10 am;
Parade the Circle, noon

11

Kirtlandia Society, Cleveland Metroparks Zoo: Past, Present & Future, 9:30 am

18

Parent & Preschoolers, Tiny Trekkers, *Butterflies*, 9:30 am;
Micromineral Society, 1 pm;
The Natural History of Melons, 6:30 pm

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Just for kids



COOL SUMMER OUTINGS

Try something new this summer! Check out the wide variety of summer programs for kids and families. Explore the outdoors, canoe, bike, hike or prospect for gold. There's even a rocket building workshop! Register early before programs fill up. Visit www.cmnh.org.

FISHING FOR SOMETHING FUN?

Fly Fishing School; Saturday, May 21; 9 am to 1 pm

The Museum's Trout Club members are experienced anglers ready to teach fly casting and the importance of conservation to the next generation of fly casters. Join them for this fun and informative family class at the Pine Lake Trout Club in Chagrin Falls. Lunch is included, and equipment will be available for loan that day. Sponsored by Chagrin River Outfitters. Cost is \$30 per person, ages 10 and up. Parent participation required. Visit www.cmnh.org to register or call (216) 231-4600 ext. 3278.

ACADIA NATIONAL PARK CAMPING ADVENTURE

This Future Scientists travel program offers youth in grades 9 through 12 a once-in-a-lifetime adventure exploring the beauty of Maine. Camp out in tents, hike, go whale watching and work with scientists in the field. Members: \$450. Need-based scholarships may be available. To apply, contact Outdoor Education Coordinator Nathan Taxel (photo right) at ntaxel@cmnh.org or fill out the application at www.cmnh.org.