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Academy Frontiers is a quarterly publication of the Academy of Natural Sciences of Drexel University, 1900 Benjamin Franklin Parkway, Philadelphia, PA 19103.

Please send questions or comments about *Academy Frontiers* to ans_editor@drexel.edu.

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On the cover: Claire M. explores the sandy beach in the newly renovated Outside In. Photo by Amy Miller Marvin/ANS.

ACADEMY GREETINGS



Dear Friends,

Just a few months ago, the Academy transformed *Outside In*, our discovery center for children. While preparing for a busy summer, our exhibits and public spaces team renovated this living exhibit, which draws thousands of visitors each month. Support from generous donors enabled us to enhance *Outside In* with new live animal enclosures, a new microscope and display screen, new lights and sounds, an improved sandy beach, and increased seating for parents, to name just a few highlights. Now when you enter *Outside In*, you'll love the open floor plan, cheerful colors, lively critters, and amazing hands-on opportunities (pages 8–11). The biggest challenge? You must decide where to visit first—the forest, the beach, the pond, or the lab.

This summer, we are in the midst of preparations for our annual Cuisine from the Collections, an event featuring unique tastings from notable chefs, gourmet fare, and specialty cocktails inspired by the Academy's collection of 18 million scientific specimens. *Chocolate: The Exhibition* (coming this fall) will be open for the event, and we will be offering plenty of delicious confections to satisfy your sweet tooth. Please contact us at 215-405-1542 or cuisine@ansp.org to request an invitation. All proceeds from this November 8 event support the Academy's programs of research and education.

Whether you are an adult adventurer, a little explorer, or somewhere in between, you can count on the Academy to be the destination in the region for information about your changing world. As always, I am grateful for your membership support of the Academy. To those of you who have contributed to the Academy's Annual Fund, thank you for helping to make our research, exhibits, and public programs possible. I look forward to seeing you in the museum very soon.

All the best,

George W. Gephart, Jr. President and CEO

P.S. At the Academy staff opening of *Birds of Paradise*, our current special exhibit, I went head-to-head with Eddie, our T. rex mascot, in a dance-off. Though I won't spoil the surprise by telling you who won, I will say that being an extinct relative of birds just may offer an unfair advantage. Find out what happened on page 6.

FOUNDED IN 1812, the Academy of Natural Sciences of Drexel University is a leading natural history museum dedicated to advancing research, education, and public engagement in biodiversity and environmental science.

ACADEMY FRONTIERS | SUMMER 2014

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Birds of Paradise: Amazing Avian Evolution

SPECIAL EXHIBITS GALLERY THROUGH SEPTEMBER 1

Lace up your dancing shoes for a journey to the remote rain forests of New Guinea, land of the exotic birds-of-paradise. An elegant example of extreme evolution, birds-of-paradise show off their feathery flair during elaborate mating rituals. In this special exhibit based on the groundbreaking research of photographer Tim Laman and Cornell ornithologist Edwin Scholes, visitors will behold the birds' cinematic courtship dances, puffed-out plumage, wild calls, and wacky behaviors through video, photography, soundscapes, and displays on research and conservation. Specimens, illustrations, and the chance to learn signature bird moves in a unique dance-off make this attraction fun for the whole family. Free with museum admission.

Birds of Paradise is sponsored by:







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Pinned: Insect Art, Insect Science

ART OF SCIENCE GALLERY AUGUST 9-NOVEMBER 9

Pinned: Insect Art, Insect Science celebrates the elegance and beauty of insects. Artist Christopher Marley uses colorful insect specimens to create intricate mosaic pieces. He photographs diverse groupings of beetles, butterflies, and other bugs, sharing with us an irresistible palette of colors and textures that reflect the amazing diversity of the insect world. His symmetrical arrangements of the mini-beasts of nature reflect the masterfully balanced design of nature itself. Alongside Marley's works, dozens of specimens from the Academy's Entomology Collection illustrate why and how scientists pin insects for research. Free with regular museum admission.



Chocolate: The Exhibition

SPECIAL EXHIBITS GALLERY OCTOBER 11, 2014-JANUARY 24, 2015

Indulge yourself in the sumptuous world of chocolate! Making its East Coast premiere, Chocolate: The Exhibition traces the intriguing story of this "food of the gods" from its origin as a unique rain forest tree to the sensuous sweet millions of people crave today. Explore chocolate's impact on tropical ecosystems, human cultures, and the global economy through a range of fun, hands-on activities for all ages. Stand under a life-size cacao tree, touch pods and seeds, and learn about the steps in chocolate production. Whether you are a novice or a connoisseur, Chocolate will engage your senses and share an enticing tale of the world's favorite treat. \$3 Individual and Family level members; Family Plus level members and above receive free admission.

> In Spanish and English. Chocolate and its national tour were developed by The Field Museum, Chicago. This project was supported, in part, by the National Science Foundation.





GETTING TO KNOW SHEILA KNOX (IF YOU DON'T ALREADY)

By Mary Alice Hartsock

SHEILA KNOX SEES EVERYTHING. Not in the "teacher-with-eyes-in-the-back-of-herhead" kind of way, although the museum literally comes to life right in front of her every day.

For 15 years, Knox has been occupying the coveted chair in the Academy's Visitor Services Department, sharing her office with the *Elasmosaurus* as she keeps watch over the museum's front door. As a visitor services associate at the Parkway admissions desk, she greets visitors, members, museum educators, scientists, administrators, and the occasional celebrity, her soft-spoken and friendly manner immediately making everyone feel at home.

On their way to lunches and meetings, Academy employees stop by the admissions desk to catch up. Whispered conversations waft through the corridors and down the marble steps. Worn-out children throw tantrums, and school kids gawk at the *T. rex* just 35 feet from her desk.

Yes, Knox really does see and hear everything, but it's a good thing, because

the cues she takes from her environment enable her to form lasting relationships with staff and guests. She is perfectly poised to make the Academy experience meaningful from the moment visitors enter the lobby.

When Knox joined the Academy 15 years ago, that same entryway was covered in ugly carpet, Dinosaur Hall recently had been remodeled, and a *Gigantosaurus* loomed over the front desk. Leaving her job in department store bridal consulting for one that involved being surrounded by overexcited kids was a relief. Knox says she has always been able to go with the flow, and having dead birds and specimens dumped onto her desk by museum visitors hoping for an identification is just another part of her day.

"You never know what each day is going to bring," she says. "If you find a lost child, you calm them down and find their parents. If a visitor comes in with a science question, you call down a scientist to answer it."

In her job Knox gets to know all kinds of people. Years ago she enjoyed regular lunches in the Academy Café with the legendary Dr. Ruth Patrick, who told stories about her early years at the museum over her daily hot dog, soup, and coffee. Knox calls some of the Academy's long-time adult visitors her dear friends. She has watched many members—including her own daughter—grow from toddlers to teens to young volunteers.

If months go by without certain members stopping in for a visit, Knox will ask them where they've been. From time to time she has been recognized around the neighborhood as "the museum lady"—a local celebrity to children who ask if she remembers them.

Knox's job usually keeps her glued to her chair. But each September, Members' Night gives her the chance not only to catch up with members but also to look around behind the scenes—the one place that she doesn't see on a daily basis. Even for an employee who has worked at the Academy for 15 years, it never gets old. "I'm always in awe, seeing things I've never seen before," she says. "Hopefully I can stay here a lot longer."



DANCE-OFF: CEO VERSUS T. REX

By Mike Servedio

HOW DO YOU GET PEOPLE EXCITED ABOUT DANCING BIRDS FROM AN EXOTIC ISLAND LOCATED OVER 9,000 MILES AWAY? You do a little dancing closer to home.

New Guinea's birds-of-paradise are best known for their elaborate mating rituals and dances. The Academy's newest exhibit, *Birds of Paradise: Amazing Avian Evolution*, opened on May 3 and features hands-on activities, video, photography, soundscapes, and displays on research and conservation of these beautiful birds.

One of the exhibit's fun and interactive features is the *Dance, Dance Evolution* arena. The interactive game pits two competitors against each other as they attempt to replicate the moves of a bird-of-paradise. Onlookers can vote to select a winner.

Prior to the opening day of the exhibit, Academy President and CEO George W. Gephart, Jr., and Academy mascot Eddie the T. rex competed in a *Dance, Dance Evolution* dance-off. Not content to go into such an intense competition without the proper training, Gephart and Eddie first headed out into the streets to train and learn some dance moves from experts around town.

Gephart took the traditional route to training, heading over to the Drexel Recreation Center to work on his conditioning and strength. He ran for miles on the track, hit the weights hard, and even toughened up with some hits to the heavy bag (bare-knuckled, of course).

Eddie took a more nuanced approach. Not only did he work on his fitness (and being a proper Philadelphian, he did so on the steps of the Philadelphia Museum of Art), but also he learned moves from the experts at the Pennsylvania Ballet, Philadanco!, and the Settlement Music School. Being the refined dinosaur that

he is, Eddie also ventured into the Art Museum to scope out some dancerelated art, including works by Edgar Degas and Henri de Toulouse-Lautrec.

At the staff opening of *Birds of Paradise*, Gephart entered the arena in a black cape and kilt to the tune of M.C. Hammer's classic, "Can't Touch This." Eddie donned a bird suit and stormed into the arena to Survivor's "Eye of the Tiger."

The competition was fierce and the competitors gave it their all, but in the end it was Eddie by a snout, winning two out of three dance-off rounds.

Birds of Paradise is open and free to members through September 1. Round up your friends and family and find out who is the best dancer in your party. Check out more dance-off photos on our Facebook page.



BIOBLITZ

By Isabelle Betancourt, Entomology



INSECTS ARE A GROUP OF INCREDIBLY DIVERSE ANIMALS
THAT CAN BE FOUND IN ALL SORTS OF NOOKS AND CRANNIES
ACROSS THE GLOBE. There are about 1 million known species of
At night, check around any

insects in the world. According to the Smithsonian Institute, there are about 91,000 known insects in the United States alone.

How many different species of insects are in your backyard or local park?

One way to estimate is by doing a BioBlitz. A BioBlitz is a 24-hour marathon field study where participants work to find as many species as possible in a given area. This summer, the Academy of Natural Sciences' Entomology Department is teaming up with Valley Forge National Historic Park to put together an insect inventory of the park. Academy scientists will be sampling throughout the summer, and on Saturday and Sunday, August 23–24, we will have a BioBlitz that will be open for all to join! Learn more at nps.gov/vafo/naturescience/BioBlitz.htm.

In the meantime try doing your own BioBlitz in your backyard or local park. It will help to have some clear glass jars handy, plus a

magnifying glass or even a camera so that you can get a good look at what you find. Look under rocks, under leaves, and around flowers. At night, check around any lights.

Consider doing your BioBlitz on a warm sunny day when more insects are active and flying around your yard or park. Refer to field guides and online insect resources to help you figure out what you see. Grab a pencil and notebook and record what you find!

You don't need to be able to identify the species. Even scientists can't always identify certain species right away. Remember, you are making an estimation. Take a look at how many different-looking insects you have, and that will be a rough estimate of how many species are present.

Want to explore even more? Repeat your study a couple of weeks later and compare your results. How many new insects did you find? How do your results compare with what you found last time? Think about what may have caused these changes. Most of all, have fun exploring!



Transforming a Living Exhibit

By Mary Alice Hartsock, Editor



Lauren DuguidANS

A six-year-old boy and his father enter Outside In, the Academy's nature discovery center for children. The space is alive with sound and movement, color and light. Off to the boy's left, owls hoot and songbirds chatter. His right ear detects the crashing of ocean waves. Behind him, a stream skips and gurgles, and a bee buzzes over his head.

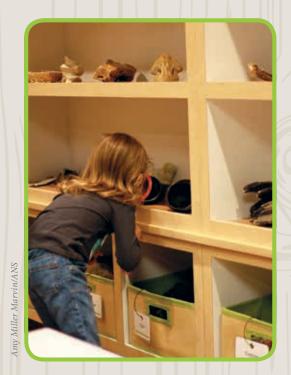
The boy turns left toward the forest, where he explores the eggs in an eagle's nest. A minute and 30 seconds later, he is arranging bug magnets near the science lab, and three minutes after that he

goes to the sandy beach. The boy likes it here. For 23 minutes he is building, digging, and filling up buckets with sand, and eventually his father joins him, unable to resist the tactile temptation.

A three-year-old girl enters, veering toward the pond and aquariums. In a moment, she's off again, this time to examine the books and the touchable specimens and fossils. Two minutes pass, and she's on the opposite side of the room examining the live cockroaches and bees with an educator.

There is more to experience in *Outside In* than could ever be covered in one, two, or even three visits. Regardless of what activities they choose or animals they touch, young visitors and the adults who accompany them emerge feeling certain that nature is fun.

"Outside In is the one place in the museum where you can touch and experience everything," says Outside In Coordinator Amy Hoyt. You can see and touch a rabbit, a guinea pig, eight different kinds of snakes, lizards, turtles, bugs, beetles, cockroaches, and millipedes, and you can inspect many more up close. As a parent, you will learn with your child



that nature is thrilling—even when it's messy—and that science surrounds you everywhere, every day.

"What if a kid could walk through a diorama?" says Sean Stallworth, who also is a coordinator in *Outside In*. "It's kind of like that!"

Stallworth grew up in urban Philadelphia and didn't care much either way about animals before he began working in *Outside In*. He began his work as an apprentice through CLUES (ansp.org/clues), a five-year program that focuses on teaching science to families in the Philadelphia-Camden region. Now he and Hoyt are

in charge of the space, regularly leading discovery lessons and handling scorpions, tarantulas, atlas beetles, giant katydids, and more. They also play "zone defense" by making sure that the exhibit is fully staffed with positive, capable, and enthusiastic employees and volunteers. The more staff the better, as *Outside In*'s popularity draws thousands of visitors each month.

Over time the steady stream of visitors became evident in the exhibit, and by 2013, *Outside In* showed many signs of wear and tear. The carpet was worn, and under dull lighting, the forest seemed threatening. The animal enclosures had grown shabby, the microscope was not user-friendly, and a trail of sand streamed from the beach.

For years the Academy's Department of Exhibits and Public Spaces had been building its renovation wish list for *Outside In*. A significant contribution from the Leo Model Foundation through Academy Trustee Allen Model (page 14) and a number of other generous donations from individuals, foundations, and corporations (page 11) made it possible for the team to begin its work.

continued on page 10



Did you know that *Outside In* is home to many of our live animals? As part of the renovation, our live animals settled into new housing. Now they have increased opportunities to meet visitors face-to-face—or beak-to-beak as the case may be. Your donation to our Adopt-A-Critter program will help us to care for the live animals and offer our educators essential teaching tools. For more information visit ansp.org/get-involved/support/adopt-a-critter/.

continued from page 9

Making It New Again

Working with Hoyt, Stallworth, and senior staff in the Education Department, Senior Director of Exhibits and Public Spaces Jennifer Sontchi rallied her team of experts to dream up enhancements that would make the biggest differences for visitors.

"We wanted to fix the space flow without changing the major bones of the exhibit," Sontchi says. "The sandbox was very popular with kids but was difficult to clean, so we wanted to keep and improve this tactile part of the exhibit."

A first step in planning the modifications was to consider the exhibit's atmosphere. Academy graphic designer Stephanie Gleit created the Outside In logo, which inspired many of the exhibit's highly visible changes. She and designer Lauren Duguid drew from the logo to select

naturally inspired wall tones, create new wallpaper, and identify surfaces and signage that would make the space feel organized and easy to navigate.

The team viewed the space holistically, integrating high-touch and investigation opportunities previously spread throughout the room into a

single ADA-compliant lab. Here, all sorts of specimens can be placed under a huge microscope created at the Academy using purchased parts. Opposite the lab are attractive, comfortable enclosures for the live animals—most of them tailor-made in-house by craftsman Jason Farris. Updated lighting by technician Bruce Tepper and soundscapes by AV producer Rich Clark are the final touches, making the Outside In experience lively and immersive.

Opened in February 2014, the new *Outside In* offers open sight lines throughout the





Will Ki

space so that parents can keep an eye on children playing in different areas. Educators are stationed throughout the space seizing every opportunity to guide children through nature. Now the staff workspace is much more conducive to interactive teaching and learning.

"In Outside In, young children can practice developing foundational scientific skills such as making observations using their senses and making predictions," said Timshel Purdum, the Academy's director of education and lifelong learning. "By providing opportunities to encourage their natural curiosity, we hope to instill a lifelong love of science."

Clearly, the renovated *Outside In* is doing just that.

"One child said, 'This is the coolest place I've ever been to,'" *Outside In* Coordinator Stallworth says. "We want all visitors to walk away with that same feeling."

Outside In is located on the third level of the Academy and can be accessed from the Butterfly Elevator. It's open during regular museum hours, weekdays 10 a.m.-4:30 p.m. and weekends 10 a.m.-5 p.m. Thank you to all the donors who made the *Outside In* renovation possible.

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The Sherry E. Weiss Fund for *Outside In*

In Memory of Cheryl Beth Silverman

IN YOUR OPINION, WHAT ARE SOME OF THE MOST BEAUTIFUL ITEMS IN THE ARCHIVES?

As an archivist often focus documentation—on words. Diaries and letters. meeting minutes and even departmental reports tell great stories, but they are not always visually stimulating. An ornately bound journal, a bulging scrapbook, or an elegantly handwritten letter stand out, but thev constitute a small portion of the archives. More often we encounter densely typed reports, ledger pages, and folders of carbon copy correspondence. They are preserved and culled for their information, not for their artistic merits.

But there is beauty in the archives. In addition to letters and journals and reports and scientific equipment, we have art.

In looking for the next collection to highlight I became entranced by two albums of Chinese watercolors that make up our Collection 476. These paintings of botanical and animal specimens are lovely. They are as detailed as the plates in familiar American or European scientific books, but the paintings in this collection are Chinese in style as well as subject matter. Before photographs, when scientists relied on sketches and paintings to transmit information about the natural sciences, style as much as accuracy influenced the final product. These Chinese watercolors demonstrate not only the difference in styles among individual artists, but also the differences represented by various cultures.



The two albums contain 148 paintings of plants, mammals, insects, and birds. The colors are vibrant and some works show the tiny veins of a leaf or the details of a feather. While the plants are painted individually and the insects and birds are shown with only a branch to stand on (much as Western scientists staged their drawings) the mammals play in idyllic scenes. Armadillos roll on the grass and horses lean against trees. The artists strived for realism, as is evident in the half-chewed and dying leaves mingling with fresh flowers.

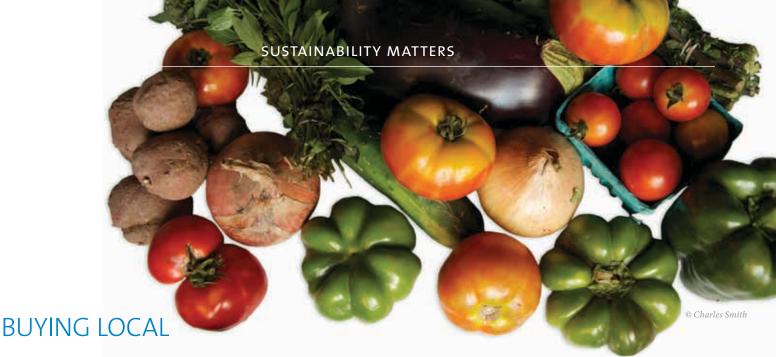
The history of these paintings before they came to the Academy is vague, but it is possible that they were painted as long ago as 300 years. An ancestor of the donor was a shipbuilder

in the early 1800s and he may have acquired the albums in the course of his work. At that time Chinese exports—art and objects made specifically for the European and American markets—poured into the States. Were the paintings in our collection part of that export market? Were they the work of a Chinese artist for Chinese patrons? Or were they the work of a Chinese scientist?

While we may never be able to answer these questions, the paintings can be used to understand the flora and fauna of China and to get a glimpse of Chinese culture in the early 19th century, and of course they can be appreciated as beautiful works of art. ~Jennifer Vess, Brooke Dolan Archivist

What have you always wondered about the Academy's history?

Please send your questions to ans_editor@drexel.edu, and we in the Academy Library and Archives will comb through our collections and respond to an intriguing question in the next issue.



MOST OF US KNOW THAT BUYING LOCAL FOODS IS GOOD FOR THE ENVIRONMENT AND SUPPORTS LOCAL FARMERS. But many of us have questions about the benefits beyond the farmers' market.

In this issue of *Academy Frontiers*, Kylie Ford helps us answer some frequently asked questions about buying local. Ford is an associate with the strategic sustainability management firm Resonate and former manager of the Bethlehem Farmers' Market.

Q: What difference am I making if I buy local food?

A: In short, you are making a huge difference, and here is just one example. We all depend on Earth's natural resources to feed us and keep us healthy. But through pollution, habitat destruction, and the burning of fossil fuels, we are diminishing Earth's living species of plants and animals. Commercial farming isn't helping. Most commercially grown produce has little genetic diversity, because only certain varieties are designed to stay fresh as they travel long distances to your table.

To keep up with population growth, we'll need to significantly increase our food supply in the next few decades. This means we'll need to produce wider varieties of foods, as is often the practice on family farms. Local farmers do not rely on crops that travel long distances and stay fresh for weeks. Growing wide varieties of foods using practices that promote nutrient-rich soil enables farmers to both help preserve genetic diversity among species and extend their growing seasons.

Q: What are the benefits for me if I buy local?

A: Buying local through farmers' markets or community supported agriculture gives you access to incredibly fresh, delicious foods and also to the farmers who grow them. If you are concerned about pesticides, you can ask farmers how their food is produced and what (if any) chemicals they use. If you are purchasing eggs or meat, you can ask whether the animals receive antibiotics and hormones, what they eat, and what conditions they live in. You can even visit many family farms, which is interesting and fun for the kids.

$Q \colon I \ F \ I$ buy my food locally, will I be able to get stuff that I like year-round?

A: One of the great things about buying local is that it encourages you to try new things. No, you won't be able to get all the foods you

enjoy year-round, but you might try some new foods and use your imagination as you discover new recipes. If you must buy foods that aren't ever available locally, try to do so in moderation.

Q: ISN'T LOCAL FOOD MORE EXPENSIVE?

A: Sometimes. But you can always try to negotiate with your farmers to identify prices that work for both of you. Just remember, with any extra dollars you spend, you are helping to make a difference for the environment by reducing the distance your food travels, helping to preserve open space, supporting the habitats of local wildlife that resides near farms, and supporting your community and farmers. Down the road, you will be glad you contributed to preserving our environment for your children and grandchildren.

Q: Should I consider a farm share or CSA?

A: Farm share programs, often referred to as community supported agriculture, or CSA, are one way to obtain local foods on a regular schedule. At the beginning of a growing season, individual "subscribers" or "members" purchase weekly, bi-weekly, or monthly shares from a farmer or community farm organization. Members then pick up their regular shares or receive deliveries according to a set schedule.

CSAs provide insurance for farmers, because if weather or other conditions affect the harvest, farmers will be financially protected. When farmers have great yields, the customers reap the benefits. If you get more food than you can handle, you can freeze or dehydrate it to use later, or you can share your share with a friend!

The Academy of Natural Sciences participates in the Delaware Valley Farm Share. Every other week, employees who subscribe to the share receive fresh local produce, eggs, and other select items for pickup at the Academy. If you are an Academy member, you can participate in the Academy's Farm Share starting in the fall growing season. Visit dvfarmshare.org for more information.

ACADEMY
SUSTAINABILITY PARTNER:



ALLEN MODEL AND ROBERTA GAUSAS: TURNING GIVING INSIDE OUT



SHE'S ONLY FOUR YEARS OLD, BUT THEA MODEL IS A PROVISITOR. Since she has been walking and talking, the Academy has been her favorite place to visit in Philadelphia. She has a favorite diorama, which she calls "Big Daddy Moose"—in other words, a moose as big as her daddy. She was front and center at the April hedgehog story time in the Academy's Library. And she has already brought her friends to the Academy for a very special dinosaur birthday party.

This year Thea is exploring a completely renovated children's nature discovery center, *Outside In*, thanks to the generous contributions of Academy supporters, including her parents. She knows the museum so well because she is the daughter of Academy Trustee Allen Model, co-founder and Managing Director of Overseas Strategic Consulting, Ltd., and Dr. Roberta Gausas, Director of Oculofacial and Orbital Surgery at the Scheie Eye Institute.

Allen Model began to support the Academy of Natural Sciences many years ago through the Leo Model Foundation, established by his father. As vice chair of the National Audubon Society, Model connected with the Academy through colleagues who shared his interest in ornithology. He joined the Academy's Board of Trustees in 2010. His commitment to the institution further increased with his marriage to Gausas, whose background in medicine encouraged many interesting conversations on the sciences.

Model calls the Academy a "jewel" with an extraordinary history and contribution to the intellectual life of Philadelphia. But as Thea spent time in *Outside In*, Model and Gausas noticed that there were certain areas of this exhibit that were "tired" and not representative of the Academy's strengths. The forest area

was dark and difficult to access and the microscope was scratched and a challenge to use, among other signs that the space had been well-loved for many years. A report from an external consultant to the Academy also highlighted this space as a top priority for improvement.

The potential scientific reward for the children and how they can grow from their experience was limited because of these issues, says Model.

Gausas knows that the Academy is the first place where some kids encounter science. Their interaction with *Outside In* is critical to establishing their interest in the field, she says. That's why it is especially important that this space be fun and full of life.

Model began talking with the exhibits and education departments, which for years had been searching for resources to update and enhance this important space. He made a significant monetary contribution

through the Leo Model Foundation to support the renovation. His enthusiasm may have rubbed off on some other trustees and supporters, who soon made their own contributions toward the project. With months of hard work from the exhibits and education teams, the space reopened in early February with a variety of enhancements and updates. (See pages 8–11 for more information on these upgrades.)

"Outside In has been rejuvenated, and the changes have rejuvenated the staff and volunteers," Model says. "They seem exuberant."

"The renovation has unveiled fantastic features that were hidden before—stunning pieces that were not very visible before the renovation," agrees Gausas.

Model and Gausas say the enhancements to *Outside In* are among many positive changes that have been happening at the Academy in the last few years. Model highlights Academy President George Gephart's role in transforming the museum through his business acumen and strategic thinking combined with his collegial and transparent manner. Of the Academy and Drexel University affiliation, Model says, "It is one of the most important things that has happened in Philadelphia philanthropy for a long time."

These changes, and many others that are planned for the future, will further promote science education and critical thinking among children and adults of all walks of life.

"We want the exhibits encountered within the museum to match the invitation and excitement children feel before entering the building," Model says. "We are looking forward to the next steps." ~Mary Alice Hartsock

DEFERRED GIFT ANNUITIES

INVESTING IN A DEFERRED GIFT ANNUITY IS AN EXCELLENT WAY TO MAKE AN INVESTMENT IN THE ACADEMY TODAY AND RECEIVE A GUARANTEED INCOME FOR LIFE DOWN THE ROAD. The payments are delayed, so they are higher in value but remain fixed and guaranteed, providing a bigger income tax deduction as well. A deferred gift annuity is a valuable benefit for both the donor and the institution it is given to, provided it is properly managed.

Here are some advantages of a deferred gift annuity:

- ➤ This type of investment allows you to make provisions for the latter stage of your life when it is possible that other investments may not fare so well due to inflation, market fluctuations, and economic slowdowns.
- ➤ The older you are at the time the payments begin, the higher the payment rate will be.
- ➤ You may receive tax benefits in the form of federal and (possibly) state annual income tax deductions. This is because a portion of the amount will be used for charitable purposes. Once you start receiving payments, a part of each payment will be tax free through the remaining years of your life.
- ▶ Quarterly or monthly payments continue for as long as you are alive.
- ➤ Deferred gift annuity payments can be transferred to your spouse or another person after your death. This is an excellent way to provide for a surviving spouse or loved one.

Deferred gift annuity funding can be done quite easily with cash, bonds, stocks, or any other securities. Low yielding assets when used to fund a deferred gift annuity offer an increase in return and at the same time entitle you to an immediate income tax deduction. Capital gain taxes may be bypassed altogether or delayed (depending on various factors) for property that is sold to fund a deferred gift annuity. This is applicable only if you are the beneficiary of the quarterly or monthly payments.

FOR EXAMPLE: A 65-year-old retired long-time Academy member currently receives \$1,500 every month from a source of investment income that will end in approximately five years. She decides to make a deferred gift annuity of \$25,000 to the Academy of Natural Sciences and have the payments begin in five years, just as her other source of income stops. Not only does she secure her own financial future with a guaranteed source of income, but at the same time, she makes a significant gift to the Academy.

Gift annuities are popular planned giving tools. They are easy to understand, simple to set up, and free from the higher administrative costs associated with some other charitable giving techniques. If you would like to explore the benefits of making a gift to the Academy of Natural Sciences of Drexel University through a deferred charitable gift annuity, or the wide range of other charitable planning ideas, contact Amy Marvin, vice president of Institutional Advancement, at 215-299-1013 or plannedgiving@ansp.org. She would be delighted to speak with you.

You already know you get free general admission with your Academy membership,

BUT DID YOU KNOW THAT'S NOT ALL?



Academy members can also take advantage of these exciting benefits:

- Exclusive members-only previews of special exhibits
- > Parking discounts at LAZ Logan Square Garage
- Reciprocal admission at over 300 science and technology centers worldwide (for Family Plus memberships and above)
- Discounted guest passes for friends and family

And much more!

Check ansp.org/membership for the latest information on your membership benefits.

ON BEHALF OF THE ACADEMY'S BOARD OF TRUSTEES, we wish to recognize and thank those who have contributed to the Academy between March 1 and May 31, 2014. Your generosity helps to fund our many programs of research and education, and we are tremendously grateful for your support.

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Thank you!

The Academy of Natural Sciences of Drexel University thanks all employees who have participated in this year's *Why I Give* staff giving campaign.

This year, 55 percent of Academy staff members have made donations to support more than 15 projects.

WELCOMING NEW TRUSTEES

The Academy is pleased to appoint two new trustees to our governing board.



Van R. Reiner is the president and CEO of the Maryland Academy of Sciences at the Maryland Science Center. With a master's in chemistry, he spent several decades in leadership at Bethlehem Steel before moving to the Maryland Science Center. Reiner also serves on the Board of the Maryland World Class Manufacturing Consortia, the Howard County Public Schools STEM Advisory Council,

Anne Arundel Public Schools STEM Advisory Council, and Maryland State Department of Education Gifted and Talented Advisory Board. He is a founding member and treasurer of the Partnership for Baltimore's Waterfront.



Ivy Silver is the founder of the Commonwealth Consulting Group, which she sold in 2008 to the publicly traded company Gallagher Benefit Services. She currently advises businesses regarding strategic and tactical initiatives through her newest entity, Sparkplug Innovations. In 2005 with her daughter she founded

a nonprofit committed to preventing eating disorders, A Chance to Heal, now internationally recognized and affiliated with Harvard's School of Public Health. She is one of the recipients of the 2006 Pennsylvania's Best 50 Women in Business Award and was the Women's Way Leadership Award winner in 2006. She is a founder of the Forum of Executive Women's Foundation and is the past president of The Abington Art Center.



BUG FEST

On Saturday and Sunday, August 9–10, celebrate the beauty of insects at Beauty and the Bug, the Academy's seventh annual Bug Fest. Learn how insects have inspired art and culture, and experience opening weekend of the Academy's Art of Science Gallery exhibit *Pinned: Insect Art, Insect Science*. Talk with an Academy entomologist about why insects are so important to the environment. Examine scores of live insects, cheer your favorite cockroach racer to victory in our famous Roach Race 500, and watch insects make their own art. Plus you can take in a bug cook-off, see specimens, get your face painted, and check out creepy crawly shows and demonstrations. More at ansp.org.



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MEMBERS' NIGHT

Every year, the Academy treats members like you to a special evening during which they can meet our staff, see our collections, and experience the breadth and depth of work that takes place behind the scenes at the museum. Join us on September 12 for chances to dust the dinosaurs, meet our scientists, wander through our collections, and more. Visit ansp.org for more information and to register.

CHOCOLATE OPENING WEEKEND

On Saturday and Sunday, October 11–12, celebrate the opening of *Chocolate: The Exhibition* with a weekend of activities devoted to the delicious science behind your favorite dessert. Discover how chocolate goes from a tree to your table, and use your senses to take a closer look at chocolate under a microscope. Smell the differences between chocolate and other common desserts. Then get a taste of the ingredient of honor. More at ansp.org.

SAVE THE DATE

On November 8, the *Chocolate* edition Cuisine from the Collections will feature food and drink inspired by the 18 million specimens in the Academy's scientific collections. A variety of food stations will include ingredients not usually found in the kitchen, from bugs and snakes to snails and more! And this year's Cuisine event coincides with *Chocolate: The Exhibition*, so you can count on some decadent menu items. To receive an invitation or for more information, call 215-405-1542 or email cuisine@ansp.org.

POETRY CONTEST

Congratulations to Leela R., 9, of Exton, who won a free household membership renewal with her acrostic poem, *Mrs. Japan*.

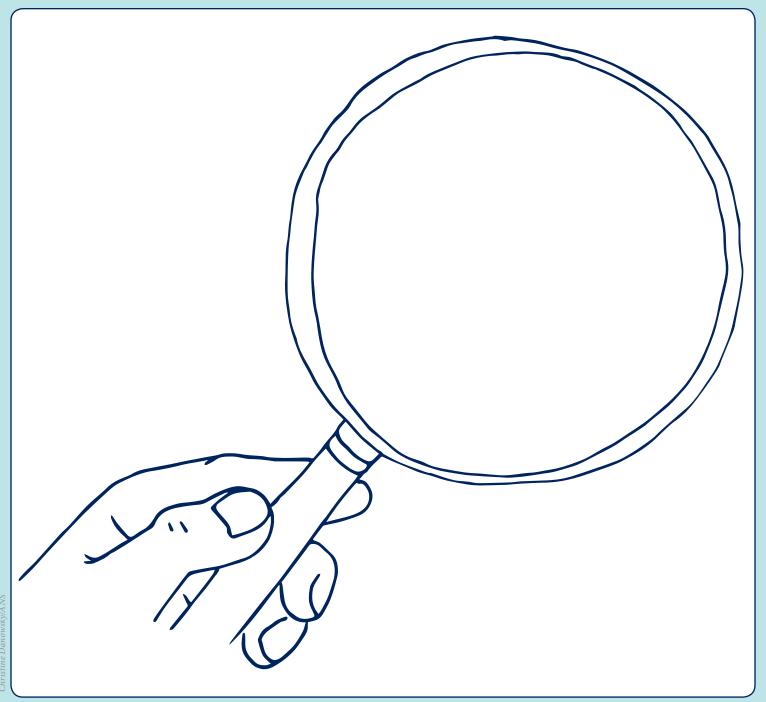
Mrs. Japan

- My lovely bird, which lives in my tree house
- **R** Robin and red
- **S** Super careful to protect her eggs, Peeper, England, Justin, and Pedí. (Pe-dí)
- Japan is the name I gave her
- A Alert for blue jays and other birds that would eat her eggs.
- **P** Pretty, and also a protector for her cute fluffy soon-to-be-chicks
- A Always there for herself and her eggs.
- N Nest she makes

COLORING CONTEST

Draw an insect and color or decorate it for your chance to win a prize!

All artwork will be displayed in the museum during our seventh annual Bug Fest: Beauty and the Bug, celebrating how insects inspire arts and culture. Two lucky winners will receive a free renewal of their household's membership plus a surprise.



Please include your name, age, and contact information on the back of your drawing and mail to Academy Membership Office, 1900 Benjamin Franklin Parkway, Philadelphia, PA 19103, or drop off your drawing at either of our admissions desks during your next visit. Entries must be received by August 6, 2014.

THE ACADEMY OF NATURAL SCIENCES

of DREXEL UNIVERSITY

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CALENDAR OF EVENTS

JULY

ACADEMY EXPLORERS SUMMER CAMP Monday, July 7–Friday, August 22 💲 🚷

TINY TOT EXPLORERS

Wednesdays, July 9-August 20

10-11 a.m. 🔇 🚷

SCIENCE ON TAP FEATURING JOHN LUNDBERG

Monday, July 14, 6 p.m. 22 S. 3rd St., Philadelphia 🐠

AUGUST

LAST DAY TO SEE UNNATURAL HISTORY Sunday, August 3, 10 a.m.–5 p.m.

PINNED: INSECT ART, INSECT SCIENCE EXHIBIT OPENS

Saturday, August 9, 10 a.m.–5 p.m.

BUG FEST: BEAUTY AND THE BUG Saturday and Sunday, August 9–10, 10 a.m.−5 p.m. **W**

PHILADELPHIA GEEK AWARDS Saturday, August 16 🔇 🚷

SEPTEMBER

LAST DAY TO SEE BIRDS OF PARADISE Monday, September 1, 10 a.m.−5 p.m. **W**

Members' Night Friday, September 12, 5–9 p.m. 🚷 🐠



OCTOBER

CHOCOLATE MEMBER PREVIEW Friday, October 10, 5:30–9 p.m. **() (0)**

CHOCOLATE: THE EXHIBITION OPENING WEEKEND

Saturday and Sunday, October 11–12 10 a.m.−5 p.m. **⑤***

AUTISM ACCESS EVENT Saturday, October 11, 9 a.m. 📞

OCEAN FEST FEATURING THE PHILADELPHIA SHELL Show & Festival

Saturday and Sunday, October 18-19, 10 a.m.−5 p.m. **M**

Mega-bad Movie Night Thursday, October 23, 5:30 p.m. § 🕒



The Academy is a proud recipient of two 2014 APEX Awards for Publications Excellence for Academy Frontiers and the 2012-2013 Annual Report.











Unless otherwise noted, all events held at the Academy are free with museum admission. *\$3 Individual and Family level member fee for *Chocolate: The Exhibition*. Family Plus level members and above receive free admission. Visit ansp.org for more information and to register.