A publication of the Seneca Park Zoo Society

Seneca Park Zoo *Using eDNA technology to tell the story of waterways*

> Seneca Park Zoo

Seneca Park Zoo inspires

our community to connect with, care for, and conserve wildlife and wild places.

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April 1 – Oct. 31: 10 a.m. – 5 p.m. last entry at 4 p.m.

Nov. 1 – March 31:

last entry at 3 p.m.

MEMBERS MAY AT 9:30 A.M.

LETTER FROM

Pamela Reed Sanchez President and CEO Seneca Park Zoo Society

On My Mind: Nature Belongs to Us All

t's Autumn, again. The trees are doing their magnificent thing of showing off brilliant L colors before shedding their leaves for winter. The Canada geese have begun their noisy migration in deep vees overhead.

Though summer is long past, the Zoo is busy many weekdays with school groups; on weekends, Fall Fest is an inviting diversion for all. It's quieter than it was a few weeks ago, so as we prepare plans for the upcoming year, we have a few moments to catch our breath and debrief on the many programs and events held this year.

A quick review of my calendar, and my posts on Facebook and LinkedIn, and I see a resounding theme: nature belongs to us all. All abilities, all ages, all backgrounds, all interests. 2024 brought partnerships with Hochstein School of Music and Cordancia Chamber Orchestra, an art exhibit with the UUU Gallery, collaboration with numerous agencies including Golisano Children's Hospital, Autism Up, Best Buddies, and Ibero-American Action League. Our Urban Ecology Workforce Development Program was stronger than ever, made possible in great part by the City of Rochester's Summer of Opportunity program. We granted more scholarships for ZooCamps and ZooTeens than ever before. Programs focused on inclusion from promotion of our self-directed membership program for those who qualify, to creating events like our "Sit and Bird" Intro to Birding through nature Journaling - are increasingly needed, and increasingly popular.

To many of us, the statement " nature belongs to us all" seems obvious, as no one can "own"



nature. It follows, then, that nature belongs to everyone. One of our jobs here at the Zoo is to ensure everyone has the same access to nature, so that everyone can connect with the living world and find their own peace and joy in it. This is wildly important work we do,

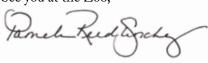
introducing people to wildlife and inspiring them to care about the animals in our care and their counterparts in Nature. We see, every day, how time in nature - time at the Zoo – evokes smiles, and laughter, and joy. There's plenty of research out there showing that time at the Zoo lowers your blood pressure,

gives you feelings of peace, and is great for your mental health. We believe everyone deserves that opportunity.

Here's the other thing about nature belonging to us all: my use of nature doesn't diminish your ability to do the same, so long as I treat nature with respect. If I don't, my actions could lead to garbage on a trail, invasive species being tracked into a pristine pond, or fertilizer from my lawn going down the storm drain and into our drinking water. Ultimately, our access to clear air and clean water depends on all of us taking responsibility for nature. That is the key message of every program we deliver: Love nature by helping take care of it. Save wildlife by taking action today. Each and every one of us.

We all look up when we hear that honking overhead; we all shuffle our feet through the gold and russet leaves on our paths. Because indeed, nature belongs to us all.

See you at the Zoo,



Christopher McKinney,

LITTA TRAPS making a difference

Chandler Scott, Communications Coordintor

At Seneca Park Zoo, our dedication extends beyond caring for animals-we're committed to protecting the environment that sustains them and us. That's why we're excited to collaborate with Rochester Institute of Technology (RIT) and the local community to address a pressing issue: plastic pollution in our waterways, focusing on stormwater's impact on the North American Great Lakes.

Stormwater and Plastic Pollution

Plastic debris is the largest type of humanmade waste affecting our planet's waterways, including the Great Lakes. While global efforts, like the United Nations' treaty negotiations, aim to regulate plastic waste, the connection between stormwater runoff and lake health is often overlooked. especially in inland communities.

Stormwater is a major pathway for landbased debris to enter our lakes, harming water quality and aquatic life. We're taking proactive steps to reduce debris and microplastics in our waterways.

LittaTraps and CASCADE

To combat this, Seneca Park Zoo and RIT have installed LittaTraps—trash capture devices-in storm drains across Rochester, including our Zoo's parking lot. These traps intercept debris before it enters the stormwater system, reducing the waste that reaches the Genesee River and Great Lakes.

Through the CASCADE program (Community Action for Stormwater Cleanup and Debris Prevention), we're fostering a connection to our waterways and inspiring community action against debris pollution. This 12-week educational program, offered in schools and community centers in Rochester, Buffalo, and Syracuse, engages participants in collecting and analyzing debris from the LittaTraps, empowering them to develop local solutions.

Expanding Our Reach

With support from the Community Action Coalition, we're expanding this program to Buffalo and Syracuse, creating a regional network dedicated to debris pollution

prevention throughout Western New York. Our goal is to raise public awareness of stormwater's impact on the environment.

Education and Engagement at the Zoo

Seneca Park Zoo is committed to educating the public about plastic pollution. Our H2OHero exhibit teaches visitors about the importance of clean water and the impact of plastic waste. Additionally, our Urban Ecologist program, a two-year internship supported by the City of Rochester, involves high school students in nature-based programming focused on plastic pollution.

The Zoo Society's partnership with RIT and New York Sea Grant (NYSG) ensures that our staff and interns receive professional development to deliver this critical programming. Over the next year, we will host 18 dedicated days of programming on plastic pollution, reaching more than 400,000 annual visitors through various educational experiences.



Litta Trap



Using eDNA to Tell the Story of a Watershed

By Beth LaPierre, Director of Marketing and Communications

The Genesee River is a cornerstone of the Rochester Community. On the brink of collapse in the 1970s, parts of the river were put on an EPA Area of Concern listing to help mitigate issues with human use of the river (swimming, drinking, and eating fish from). Since being listed, the river has reversed course and is now considered a healthier ecosystem. In 2015, the Zoo conducted a biosurvey to look at the small things in the river, discovering a variety of resilient diverse wildlife.

Continuing to tell the story of the Genesee through the wildlife found there, the Zoo's Urban Ecologists, a 2-year workforce development program in partnership with the City of Rochester, spent time this summer using eDNA technology to test the river and its tributaries to look for the elusive North American river otter. The Zoo has long been involved in North American river otter conservation, starting in the 1980s assisting with translocating otters, which were regionally extinct. The current eDNA project builds on more than thirty years of work saving otters. The river otter is a bioindicator. Their presence in a river or tributary can help gauge ecosystem health. By using this cutting-edge technology, the Zoo's Urban Ecologists can blend traditional scientific techniques to target waterways to test. Using a water sample, scientists will look for remnants of otters, helping us provide vital science on the success of the otter reintroduction campaign the zoo was a part of in the 1990s.

Environmental DNA, or eDNA for short, is a tool for scientists who want to know what animals are living in places like rivers, lakes, or forests without seeing them. Imagine every time an animal swims in the water, walks on the ground, or flies in the air, it leaves tiny bits of itself behind, like scales, feathers, or even just bits of skin. These tiny bits contain DNA, which is like a special code that tells us which animal it came from.

Scientists can collect water from a river or soil from the ground, or even air with a vacuum and use special tools to identify DNA in it. They then match the DNA to different animals, kind of like solving a puzzle, to figure out what animals are living there. It's a way to learn about animals that are hard to find or see, and it helps us know how to protect them and their homes. This works because every animal has its own unique DNA code, so scientists can tell exactly which animals have been in that area, just from those tiny bits they left behind!

Continued on next page



In 2023, Seneca Park Zoo's Urban Ecologists learned about the ecology of local river otters and the conservation efforts that brought them back from extinction locally, returning them to the watersheds of Western NY and our own Genesee River. This research led to interest in the study and observation of their current presence. The Urban Ecologists wanted to learn where river otters are living and traveling to. To achieve this, camera traps were deployed around Rochester. No evidence of river otters was seen on our cameras, so the Zoo has begun employing eDNA technology to study them. Environmental DNA (or eDNA) to analyze for otter species present in our waterways. This past winter, the Urban Ecologists met Conservation Biologist Mai Fahmy, who spoke to them about her research that is centered on the use of eDNA for applications in conservation. Over the summer, Urban Ecologists were tasked with going to local waterways, collecting samples of water with eDNA kits that were created specifically to detect river otter DNA, then send the kits off for discovery. Members of the Great Lakes Action Agenda Workgroup were asked to nominate sites where otters were observed.

In August 2024, Urban Ecologists traveled to Finger Lakes Community Colleges' Muller Field Station, located on a 48 acre property at the end of Honeoye Lake. It sits upon the traditional lands and waters of the Seneca Nation, next to the New York State Department of Environmental Conservation's Honeoye Lake Wildlife Management Area. The Honeoye Lake watershed is a mosaic of 40 natural communities and a home to over 1,200 species of trees, plants, fish, amphibians, insects, birds, and mammals.

Urban Ecologists toured the field station, learning about the work FLCC does. They then took canoes out onto the swamp and sampled the water using JonahWater eDNA kits with the goal of identifying the presence of North American river otters. The data that is found will now be shared with conservation partners like the DEC. For most of our young Urban Ecologists, this was their first experience with field work and data collection. If the study is successful, this could give our UE's the potential to be involved in future studies and published research. This work provides hands-on experience UEs will share with the public through presentations to local recreation centers and to Zoo guests through our nature Cart.

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TOGETHER, OUR IMPACT IS WILDLY IMPORTANT

You can help your community and our environment before the year is over! Please consider giving to support the Seneca Park Zoo Society's education and conservation programs, serving people of all ages, all year round.

Your contribution to the Year-End Appeal provides direct support for programs like KinderZoo, ZooMobiles,

Nature Hikes, Community Cleanups, ZooTeens, and the Nature Cart. You can help us make the Zoo an oasis for people of all needs and backgrounds and help us reach even more of our community through outreach programs throughout our region.

Donating today is easy! Just use the envelope in this issue of ZooNooz or donate online at **senecaparkzoo.org/give**.





HELP US, CONTINUE TO DO WILDLY IMPORTANT WORK!

SENECAPARKZOO.ORG/GIVE

CUB & GIRL SCOUT WORKSHOPS

Seneca Park Zoo offers an array of workshops for all levels of scout troops. Programs are designed to meet badge requirements and build skills. Troops register for their own private workshop which costs \$250 for up to 10 scouts and 2 scout leaders.

Register: senecaparkzoo.org/scouts



SCOUTS BSA WORKSHOP

NOVEMBER 2

Mammal Study, 1-4 p.m. November 2 – During this workshop scouts will investigate what makes mammals unique as they observe the many mammals that live in Seneca Park Zoo.

Price: \$35 per scout

Date: November 2

Register: senecaparkzoo.org/scouts



TREK IN THE TWILIGHT

SEPT. 14/OCT. 11, 26/NOV. 9, 15/DEC. 7

This is an evening program for scouts, youth groups, and the adults that support them. Included in each Trek is a pizza dinner, an animal presentation, and a guided Zoo tour.

Price: \$30 per scout/youth \$25 per chaperone/adult

Dates: Sept. 14 Oct.11 & 26, Nov. 9 & 15, Dec. 7

Register: senecaparkzoo.org/trek



WILDLIFE ACTION CREW

SEPT. 18, 25/OCT.2, 9, 16, 23/NOV. 6, 13, 20/ DEC. 4, 11, 18

Wildlife Action Crew is for teenagers interested in animals and conservation. Teens conduct a conservation case study, learning about and discussing a conservation issue, animals that are affected, and what is being done to help. They will select an action that addresses the conservation issue and work in groups to create a campaign to promote their message. Teens attend six classes that are held at the Zoo on Wednesday evenings from 6-8 p.m.

Price: Members \$55, Non-members: \$60

Dates: Giraffes & Habitat Loss, 6-8 p.m. September 18 & 25; October 2, 9, 16 & 23 Snakes & Human Conflict, 6-8 p.m. November 6, 13 & 20; December 4, 11 & 18 Register: senecaparkzoo.org/wildlife



DAY OFF ZOOCAMP

OCT. 14/NOV. 11/DEC. 27, 30

School is out, so come to the Zoo instead! It's like Summer ZooCamp in a single day! For ages 5-9 years old 9 a.m. to 4 p.m. **Price:** Members \$45, Non-members: \$55 **Dates:** Animal Coverings, October 14 Animal Coverings, November 11 Tons of Tails, December 27 Tons of Tails, December 30 **Register:** senecaparkzoo.org/zoocamp



EDUCATION

KINDERZOO

DATES AVAILABLE SEPTEMBER-DECEMBER

KinderZoo is a program for preschoolers and their grown-ups to play, discover, and learn in a fun, interactive way. Join us as we explore different animals and habitats, using games, BioFacts, and engaging, age-appropriate activities. Each class will also include the opportunity to meet an ambassador animal up-close and learn all about them. The same class is offered four times per month for each age group.

Members: \$12 per student Non-members: \$14 per student

Please note: Admission tickets/membership also required to enter the Zoo.

Gripping Geckos (18 months-3 years old) 10:15 a.m. September 17, 20, 27, 28

Tons of Tails (3-5 years old) 11:30 a.m. September 17, 20, 27, 28

Mighty Millipedes (18 months-3 years old) 10:15 a.m. October 5, 18, 25, 29

Zoo-per Heroes (3-5 years old) 11:30 a.m. October 5, 18, 25, 29

Fabulous Frogs (18 months- 3years old) 10:15 a.m. November 5, 8, 16, 22

Splish Splash (3-5 years old) 11:30 a.m. November 5, 8, 16, 22

Bright Birds (18 months-3 years old) 10:15 a.m. December 3, 6, 13, 14

Animal Colors (3-5 years old) 11:30 a.m. December 3, 6, 13, 14

Register: senecaparkzoo.org/kinderzoo







FALL FEST

WEEKENDS IN OCTOBER

For the entire month of October, join the Seneca Park Zoo in celebrating Fall Fest. From fall-themed animal enrichment programs to delicious cider and fry cakes—it's the perfect way to welcome the new season. Plus we are bringing back our Spooktacular evening event!

Date: Weekends in October

Visit: senecaparkzoo.org/fallfest

SENECA PARK ZOO SOCIETY COMMEMORATIVE BRICKS

SEPTEMBER - DECEMBER

The Seneca Park Zoo Society brick program provides critical funds to ensure the sustainability and development of the Zoo Society's conservation and education programs for future generations. Each brick is a lasting reminder of our patrons' generosity and their dedication to Seneca Park Zoo. Don't miss out on this wonderful opportunity, order your engraved brick today!

To learn more, visit senecaparkzoo.org/brick

RISE AND SHINE CART TOURS

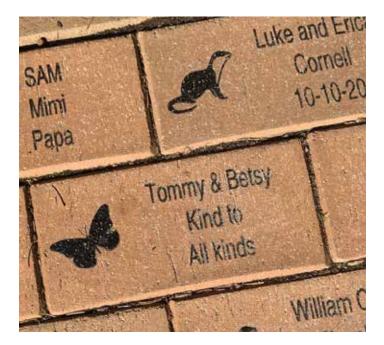
NOVEMBER 29, 30/DECEMBER 1

Come wake up with the zoo for a naturalist-guided golf cart tour and experience the zoo as the animals are starting their day. Each tour is 90-minutes long and you'll learn about the animals that call the Seneca Park Zoo home.

Dates: November 29, 30 December 1

To learn more, visit senecaparkzoo.org/series/2024-rise-and-shine-cart-tours









AFTERHOURS SPOOKTACULAR

OCTOBER 17, 18, 19

Evening fun at the Zoo! Put on your costumes and join us as we celebrate Spooktacular with trick-or-treating through the Zoo, pumpkin carving demonstrations, storytelling, animal experiences, Halloween crafts, costume photo-op, and spooky surprises! Individuals and families – all ages welcome! Ticket sales help support Seneca Park Zoo Society's many educational and conservation programs.

Date: October 17, 18, and 19, 5:30 p.m. – 8:00 p.m.

Tickets:

General Admission tickets are \$15 (non-member) \$12 (member), 2 and under are Free.

*Tickets must be used on a date selected at purchase.

Visit: senecaparkzoo.org/spoooktacular



MEMBER BRING 2 GUESTS HOLIDAY WEEKEND!

NOVEMBER 29, 30/DECEMBER 1

Have family in town for the holiday or just want to walk off some of those Thanksgiving calories? This weekend, members are invited to bring up to two additional guests per membership on their Zoo visit. And the morning of Saturday, November 30 stop by the pavilion for complimentary cider and donuts!

Date: November 29, 30 and December 1



EVENTS

COLD ASIA AWARENESS WEEKEND

OCTOBER 5, 6

Join us for Cold Asia Awareness Weekend, where the chill of the Asian wilderness comes to life! Immerse yourself in the fascinating world of some of our most captivating cold-climate animals.

Our expert naturalists will be on hand to share insights into the incredible adaptations that allow Snow Leopards and Red Pandas to thrive in their frosty habitats. Meanwhile, our knowledgeable docents will guide you through the striking differences and surprising similarities between Amur and Bengal tigers.

Don't miss this unique opportunity to deepen your understanding of these magnificent creatures and their icy homes

Dates: October 5 & 6

COLD ASIA AWARENESS WEEKEND



Seneca Park Zoo

COMMUNITY CLEANUPS

OCTOBER 5

Seth Green Park Cleanup: ROC the Riverway **Date:** Oct 5 **Time:** 9 a.m. - 12 p.m. Genesee Gateway Center: Community Paddle Cleanup **Date:** Oct 5 **Time:** 3 p.m. - 6 p.m. **Learn more:** senecaparkzoo.org/cleanup





Seneca Park Zoo

GIVE THE GIFT OF SENECA PARK ZOO!

ALL YEAR-ROUND

Memberships are an eco-friendly gift that gives all year round. Seneca Park Zoo is a terrific year-round destination to get outdoors and connect with amazing animals! Membership benefits for your gift recipients include free admission, discounts, early access, and more. And you can feel good knowing your gift of the Zoo keeps your gift giving local while helping to conserve wildlife and wild places.

senecaparkzoo.org/zoogift

SENECA PARK ZOO









A publication of the Seneca Park Zoo Society



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Seneca Park Zoo Society

ZooNooz is printed on recycled paper.

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Permit No. 42

Chandler Scott, Communications Coordinator

Contributing writers: Designer: Amanda Lindley

Beth LaPierre, Director of Marketing and Communications

When you're finished, please share it with a friend.

from the brink of extinction. the Seneca Park Zoo Society plays an integral role in supporting Monroe County, the some sand operators of the Zoo. Together, we are working to bring animals back more and operators of the Zoo. species survival. Chartered as an educational institution in 1957 by New York State, Internationally, and in our own backyard, Seneca Park Zoo plays a key role in

Pamela Reed Sanchez, President and CEO, Seneca Park Zoo Society

senecaparkzoo.org | 585.336.7200 | The Zoo is open 362 days a year.





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