On the Cover:
The Brandywine Zoo has two binturongs, one male and one female. Both were born in 2022. More about binturongs on page 7.

RED PANDA FACTS

• Red pandas lick themselves clean, just like house cats do.
• Newborns hardly have any fur on the bottoms of their feet. The fur grows as they get older.
• Red pandas wrap their tails around themselves to keep warm in their chilly habitat.
• They eat up to 20,000 bamboo leaves every day.
Delaware Zoological Society Executive Director Message

As we come to the close of another fun season at the zoo, I want to take the time to thank everyone who helped to make this season so special. First of all, the staff. I hope you have had an opportunity to engage with members of the zoo staff when you’ve visited the zoo. If you have, I have no doubt you walked away with an understanding of the professionalism and care they have for the animals, the environment as well as your experience while visiting. When we review the feedback we receive via our guest surveys each month, our guests (first time visitors and members alike) rave about their interactions with staff.

From the Visitor Services people who first greet people upon their arrival… to the keepers who run our daily keeper talks… to our docents who man tables throughout the zoo…to all the volunteers who assist us with our special events… to our education staff who run programs on the grounds as well as “creature features”, they all have one thing in common- to deliver on our Vision Statement: For every guest and every visit, we strive to inspire awe and action for wildlife.

Of course, without the support and generosity of the public, and especially our members, none of this would be possible. So, a big thank you goes out to you as well.

As a non-profit, we need to raise funds to maintain and upgrade our facilities as well as provide the resources necessary to run our educational and conservation programs. In addition to the donations we receive, gate admissions, gift shop and concession sales, membership dollars all contribute to these efforts.

We are also very appreciative of our membership partners, The Delaware Children’s Museum, and The Delaware Museum of Nature and Science as well as the Hagley Museum and The Delaware Contemporary Museum which assists in our programming.

Thanks, too, to the many granting foundations that have supported our programming and capital needs this year.

It’s been said that it takes a village. What a wonderful village we all belong to here at the Brandywine Zoo. I thank you all for your support. We can’t continue to do what we love, without you.

Mark Shafer

WORLD LEMUR FESTIVAL

October 28 & 29

https://brandywinezoo.org/world-lemur-festival/
The Brandywine Zoo is proud to once again participate in Toys for Tots. Each year the Brandywine Zoo partners with Delaware State Parks and the U.S. Marine Corps Toys for Tots foundation to collect thousands of toys for children in our area. This foundation helps ensure that less fortunate children have a brighter holiday season.

Please consider donating a new, unwrapped toy to this worthy cause. You can also purchase an item right from the Zoo’s own gift shop and support the zoo at the same time! We will be collecting toys until Monday, December 11th. If you are attending Santa at the Zoo, it is a great opportunity to drop off a gift!

Toys can be delivered to the Gift Shop any day between 10:00am and 3:30pm. No zoo admission is necessary. If you have any questions, please call the Visitor Services Manager, Melanie Flynn at 302-407-4415.

www.brandywinezoo.org
This summer, the Conservation Education department launched a new program called Planet Protectors. Its focus was to empower and support local residents in their efforts toward making real change when it comes to environmental issues at home and abroad. Free for participants and with supplies funded through a grant from the Institute of Museum and Library Services, we saw a number of interesting projects take place from Newark to Wilmington. Highlighted here are two in particular.

Scout Café opened at the beginning of 2023 and owner Nick Qaabar quickly became a figure in the community. Only blocks from the zoo, it made sense for us to partner…but how? During a meeting in early spring, Nick mentioned wanting to plant natives around the property. That turned into their involvement with Planet Protectors a few months later. With the help of some loyal customers, they organized a variety of methods to not just plant but educate. Social media and onsite flyers informed customers of the project and how they can do the same at home. A nature walk from the café to the zoo, led by Master Naturalist Barb Kanter, connected people with the neighborhood, opening their eyes to the trees, shrubs, flowers, and vines they may see every day but not really see. Along the way were discussions of gardening tips, invasive plants, and free-roaming cats. Planting day in the corner plot required some muscle but even after breaking a shovel, volunteers persevered to get the job done. The new bee balm, aster, and milkweed create a pollinator café of sorts. Thanks so much to Peg at Gateway Garden Center for offering a discount on plants purchased by program participants. Native plants are critical for biodiversity as they help pollinators and create ecosystems for many types of wildlife. They also require less water, a conservation win!

How to manage the various waste generated from daily home life is what neighbors Victoria Franz and Megan Stern decided to answer with their project. They saw the many snack wrappers from their children’s lunches as a problem that must have a better solution than that of garbage. With some research they discovered a few local businesses were collection points for different types of hard to recycle items. Teracycle boxes can provide the public with better disposal options for chip bags, string cheese wrappers, plastic utensils, and water filters to name a few. As parents, Victoria and Megan also saw non-donatable clothing as waste that must have a better place. Many textiles are made of
plastic by way of polyester, rayon, nylon, or acrylic. As garbage they breakdown into microplastics, which create a multitude of problems for animals, people, and water needed to sustain life. They successfully located a female/minority-owned business for textile recycling in Delaware called Phoenix Used Clothing. Various drop off locations exist, so check out their website for one near you and feel good about keeping your things out of landfills. A workshop was held at the zoo education building for community members to learn about all this and more. Crafting unwanted items into something useful and learning about composting from an expert were other offerings that day. Not only did this group facilitate all that, but they also organized a trip for neighbors to visit the DE Solid Waste Authority to learn more about recycling. Children and adults were treated to a free program by the education team and had a chance to see what it's like sorting items on the conveyor belt during a mock run. We thank all the participants in Planet Protectors and hope they continue their efforts to solve big problems on the local scale. We were delighted to hear Victoria say, “I’m so glad I participated in this program because I learned so much and found solutions to problems I see every day.” We’re glad you did too!
New At The Zoo

**Binturongs:** Binturong have coarse, thick black fur and a long bushy prehensile tail that helps act as an extra limb to grip onto branches while climbing through trees. Binturong urine contains the same chemical compound that gives popcorn its buttery scent. The distinctive smell helps them to communicate with each other and warn-off potential predators. Binturongs are often called ‘bearcats’ but aren’t bears or cats! They are members of the Viverridae family along with other medium sized cat-like mammals such as fossa and civets.

**Caracal:** The Brandywine Zoo has a female caracal born June 6, 2016 and acquired on July 19, 2023. A sleek, short-haired cat with reddish-brown fur and black tufts of hair on their pointed ears. Their undersides are white and, similar to African golden cats, are adorned with many small spots. The trademark features of caracals are their elongated and black-tufted ears. Their legs are relatively long and the hind legs are disproportionally tall and well-muscled. The word caracal is from a Turkish word that means “black-eared.”

**Crowned lemur:** The Brandywine Zoo is excited to announce its newest addition, a baby crowned lemur. The lemur baby was born to crowned lemurs that came to and were paired at the Brandywine Zoo in October 2020 as part of an Association of Zoos & Aquariums (AZA) Species Survival Plan (SSP).

“What a sweet letter from Kayla in Tacoma, WA!”

Dear Brandywine zoo, congrats on your new baby lemur! Congrats to the lemur family & mom and dad. Kayla Uy ipigno.

Congrats Brandywine zoo.
When you hear or see the words “monarch butterfly” you likely picture the orange and black insect immediately. I imagine quite the contrary happens with “marbled murrelet” (by the way, that’s a cool seabird from the west coast). When an animal is known by almost every man, woman, and child it would seem to be invincible. This logic is similar to the famous quote by Jane Goodall, “Only if we understand, can we care. Only if we care, will we help”. Most people understand what a monarch butterfly is- a flying insect that starts life as a caterpillar and needs flowers for food. So, if everyone knows that, why is the population in decline? Why are they not invincible? The critical addition to understanding is knowing the challenges they face for survival. That is where the SAFE Monarch Network enters the story. Our accrediting body, the Association of Zoos and Aquariums, has frameworks for a multitude of threatened species with the goal of Saving Animals From Extinction. As a program partner, Brandywine Zoo has committed to execute various initiatives to help monarch butterflies. This is primarily done through education and our recent Mighty Monarch Day is a perfect example.

We invited three University of Delaware Cooperative Extension Master Gardeners to engage with guests on the subject. They brought books, pictures, plants, brochures, and more. They even had a chrysalis and some monarch caterpillars crawling around. As one boy held a squiggly specimen in his hand, he exclaimed it pooped on him! Fun fact: only the caterpillars technically poop; adult butterflies merely excrete liquid since they do not consume solid food. During their visit, guests also perused vendor goods with pollinator connections like honey and flowers from Lindsey’s Garden, hand crafted soap from Annie’s Market Stand, and original jewelry from Cork & Charm. Many enjoyed a lunch of empanadas and soup from Empanalgas302, followed by a stop at concessions for a churro dessert. Photos with Mrs. Delaware, Dr. Lisa Albright, in her huge monarch wings were seen being taken throughout the zoo. Children had fun learning about the insects’ life cycle and migration through story book readings.

This event is held in the fall, allowing us to celebrate the amazing migration monarchs take to Mexico each year. Equally as important as learning about the animal is learning our two countries must cooperate in its conservation. We were proud to have Cem Anahuac Cenyelistli help highlight that connection once again through traditional dance of the Indigenous Peoples of Mexico City performed on our amphitheater stage. Culturally, monarch butterflies are quite significant to Mexican people as they are seen as the souls of loved ones returning to briefly reunite with the living. It’s no coincidence Dia de los Muertos, or Day of the Dead, occurs around the time monarchs arrive in central Mexico to overwinter in oyamel fir forests.

Protection of those forests in Mexico and open meadows in the US will keep these beautiful butterflies, and other important insects, with us. That means we must minimize new development, identify space in current landscapes, avoid pesticides, and grow native plants. Every single one of us can do it! Pots on your balcony or gardens in your yard. Supporting insect-focused organizations or lending your voice to legislation around neonicotinoids or the sale of invasive plants. Have you completed the understanding step? We hope to have elevated you to care with plans to help just around the corner. Meanwhile, let us join and say “Viajes seguros mariposas monarca”!
Docents Go Clubbing
By Jen Klotz, Community Engagement Specialist

After visiting a zoo out of state, our Manager of Volunteers, Sara Kennedy, was inspired to create a Docent Garden Club. Although there are only a few members, there has been a large impact. The entrance garden used to have a large butterfly bush in the center. Its removal earlier this year left a vacancy but was necessary. *Buddleia davidii* came to America from Asia, via England, and has been determined invasive in several states due to its tendency to spread fast and crowd native plants. In its place at the front of the zoo you will see a young eastern redbud (*Cercis canadensis*). Surrounding it were a mix of purposeful and undesirable volunteer plants. Lamb’s quarters and mugwort grow tall and spread fast. They had taken over much of the front bed so that was the first target for the new club. Now without them, pollinator plants like black-eyed Susan, boneset, phlox, coneflower, New England aster, mountain mint, and cardinal flower can thrive.

The next stop was the pollinator garden behind the bee exhibit. Docents weeded and staked tall plants that had drooped creating a better aesthetic while still leaving the space natural. They had to be mindful of the many bee species flying around though. Two people had one get in their hair but were not stung. It was decided to leave the bed closest to the bee exhibit untouched until they are moved for the winter season. Ladders were needed for the next project, which was to remove porcelain berry vine from atop holly trees by the education building. This vine, along with English ivy, is invasive and smothers plants. Sure, it has beautiful berries, but it just had to go! A fun spring project for the club will be renovation of the Bug B&B that is located behind Nature Play. Colorful paint and new “rooms” will showcase this important overwintering space for bugs. Without bugs, ecosystems would crash. We hope our hotel will inspire you to find ways to help them where you live.

One last note. You may wonder why there are dead flowers left in our gardens. Spent stems of coneflower and black-eyed Susan are full of seeds. Those seeds are eaten by several animals, primarily birds. In particular, the small, bright yellow and black American goldfinch. They nest late in the season and exclusively feed their young seeds. Therefore, those ugly, dead flowers will provide parent birds with a reliable food source for their hatchlings. There are many reasons to nurture plants and our new Docent Garden Club will ensure we do what we can here at Brandywine Zoo.
Bog turtles (Glyptemys muhlenbergii) are the smallest turtles found in the United States and one of the smallest turtle species in the world, measuring only 4.5” as an adult. They have a scattered distribution from New England through the middle Atlantic region, around the eastern Great Lakes, and north Georgia and eastern Tennessee through the western Carolinas and western Virginia. Bog turtles are semi aquatic and prefer open bog or wet meadow habitats that support tussock forming vegetation vital for reproduction. In Delaware, they are listed as Endangered; nationally they are listed as Threatened and Critically Endangered by the International Union for the Conservation of Nature (IUCN).

In Delaware there are fewer than 5 extant populations of bog turtles, and these have been monitored by the Delaware Division of Fish & Wildlife (DFW) since 1992. These turtles have microchips so that the biologists can identify individual animals.

After several years of nest monitoring, DFW concluded nest success was too low to sustain recruitment and populations were declining. In 2022, the Brandywine Zoo partnered with DFW and some of the bog turtle eggs were brought into the zoo’s new Animal Care Center where they were set up in incubators. Ten eggs hatched, and the hatchlings were returned to the wild.

This year, the first of the eggs arrived at the zoo on 19 June and were again set in an incubator. Additional clutches arrived over the next two weeks. The first bog turtle hatched on 11 Aug. This season we hatched out 21 baby turtles including a leucistic one. Leucism is a genetic condition where an animal has reduced pigmentation in its skin, but is not a true albino.

Sixteen of these babies are scheduled to be returned to the wild, where the eggs were collected in early October. The remaining five will be overwintered at the zoo to head start them, and then they will be released in the spring with radio-transmitters for monitoring. The partnership between DFW and the Zoo is an example of a cooperative effort that is helping our native wildlife.
Upcoming Events & Programs

World Lemur Festival ..........October 28 & 29

Scout Night .....................November 4

Sensory Hour .....................November 11

Santa at the Zoo ...............December 2 & 3

Noon Year’s Eve ...............December 31

First Day Hike at the Zoo .....January 1

Little Nature Explorers .........Ongoing Sessions

For More Information, visit www.brandywinezoo.org