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The Zoo News is a publication of the Delaware Zoological Society.

#### On the Cover: Welcome Haechan!

The three-year-old southern pudu male gained fame in 2019 after K-Pop fans donated to name him in honor of a member of the popular group NCT-127. Now that the pudu is a mature adult, he has a new engagement at the Brandywine Zoo to be paired with a potential mate. For more, read the full stories on pages 3 and 4.



## Conservation Leadership Academy

By Jen Klotz, Community Engagement Lead at Brandywine Zoo

In continuing with the mission of the Brandywine Zoo to inspire wildlife conservation, we have created a new program for teens called Conservation Leadership Academy. Our goal is to increase their awareness of conservation in action through community-based conservation opportunities. A select group will be chosen and meet once a month from February through October, while designing and facilitating their own project in their own community. Projects can range from organizing a cleanup effort to planting a pollinator garden. Each monthly meeting is based around a topic and how it weaves into conservation efforts locally and worldwide. Topics include, but are not limited to, human-wildlife conflict, plastic pollution, climate change, and diversity and inclusion. A related service-learning opportunity occurs monthly too! Alongside all this, participants will be trained as zoo docents allowing yet another way to reach the hour requirement needed for program completion. With all this knowledge, CLA teens will be wonderful mentors to our youth

docents and hopefully inspire future academy candidates. Conservation Leadership Academy was made possible through a grant from the Institute of Museum and Library Services, offering funds for participants' project work, t-shirts, and a monetary award at completion of the program. Keep an eye out for this logo around town and the positive change they create in Wilmington!









## Tiny But Mighty — The Southern Pudu

The Brandywine Zoo is on average, smaller than most zoos in major American cities. The collection has varied dramatically since its origins in 1905, once exhibiting bears, elk, and even a sea turtle to today's collection which includes red panda, capybara, and several species of birds. The Zoo has streamlined its collection and redesigned several older habitats, while building positive momentum to



its future goals include a master plan developed in 2018.

As the Brandywine Zoo continues working towards the multi-million-dollar master plan, Our Zoo Reimagined, the animal collection is shifting to reflect that development. The \$3.5 Madagascar habitat, which opened in 2020, showcases three species of lemurs, radiated tortoises, and helmeted guinea fowl along with messaging on conservation initiatives within the island nation. The Zoo's current project, a \$4.3 million state-of-theart Animal Care Center, is due to open this spring and will drastically expand veterinary and animal management capabilities. The ACC is approximately four times the current hospital space and will have specialized spaces for treatment, animal holdings, and record keeping. The holding spaces will be used for incoming animals, which need to undergo a 30–90-day quarantine period upon arrival, to ensure they are healthy when introduced to the Zoo's current collection. Future collection animals will include the species selected for the next phase of the master plan: a new entrance and South American

This dynamic mixed species habitat will one day include flamingos, sloths, and the Zoo's newest hooved residents – southern pudu. Also known as the "pudu deer" or "dwarf deer," southern pudu are native to the temperate forests, shrublands, and secondary forests of South America. Although the species is the world's second smallest deer, it is the largest native herbivore in much of its range. The species' Latin name, Pudu puda is adapted from Mapudungun, the language of the Mapuche people, who are indigenous to Chile and Argentina.

wetlands habitat.

Southern pudu are closely related to the smallest deer species, the northern pudu. Both are members of the deer family, Cervidae. "Cervids," as deer are called in the zoological community, are evolutionarily related to other ruminants and eventoed ungulates – meaning they chew their cud and have two hooved toes on each foot. They are found in a wide variety of habitats including rainforests, deserts, and mountainous regions, vary in size from the pudu to moose, and have some shade of brown fur. Many cervids are excellent swimmers, use scent marking as a main form of

communication between individuals of the same species, and typically have excellent night-vision. In almost all members of the deer family, males grow antlers and experience rut, or a surge of hormones during breeding season when competing for females or territory. The males first grow antlers "in velvet," or a soft velvet-like covering, until the boney head-ware reaches full

size (which depends on species and age of the individual) and rub the velvet off on their surroundings to reveal the "hard antlers" underneath.

Southern pudu adults stand at approximately 14-17 inches at the shoulder and weigh between 25-30 pounds; causing most zoo guests to believe they are seeing a fawn instead of an adult! Adults have fur coats that vary between different shades of dark brown, while fawns (baby pudu) have white spots for the first few weeks of life, like white-tailed deer

fawns. Males are polygynous and may breed with multiple females each year. Although typically solitary when not in breeding season, breeding pairs may spend prolonged periods together, and fawns will become independent around eight months of age.

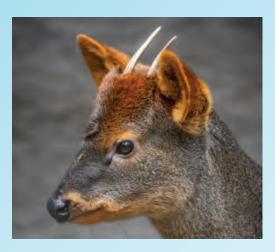
Male pudu have antlers, either velvet or hard, most of the year; they will drop them in late fall and almost immediately begin growing the next set. Pudu are primarily diurnal (active during the day), but can often be observed resting throughout their habitat and ruminating (chewing their cud) if there are no signs of predators. The pudu's small size often means it is preyed upon by puma, spotted cats, dogs, and large birds of prey. However, its size also helps it stay hidden. Often camouflaged by its fur coat and small stature, pudu can move through ground cover with ease. They are also extremely adept jumpers and will often play-spar with one another, either parents and offspring or a bonded pair. This "practice" is practical in the wild – their quick moves allow them to dart and dodge predators.

Pudu, like all other deer, are browsers, eating leaves from taller plants (as opposed to grazers that consume grasses). They will also eat fruits, flowers, and bark of plants as they browse. One of the biggest barriers to their conservation is the remote locations they inhabit – but that fact may also help them survive in their more remote locations. Like other wild herbivores, pudu face a variety of threats including deforestation and fragmented habitats, encroachment from feral dogs and invasive species, and diseases spread by grazing livestock.

Pudu in human care are cooperatively managed between institutions accredited by the Association of Zoos and Aquariums and the Southern Pudu Species Survival Plan (SSP). Through its master plan, the Brandywine Zoo has committed to housing pudu in the future South American habitat. However, the Zoo was able to bring the species in well before the ground is even broken for the new habitat! The Zoo repurposed and combined three older habitats, once housing clouded leopards

among other species, to create a larger space for a multispecies habitat. The Zoo has since housed three southern pudu since 2021: a mother-daughter pair from the Jacksonville Zoo and a male from the LA Zoo.

Visitors can currently see the younger female, Clover, and the male, Haechan, in their habitat to the left of the picnic circle, between the barnyard and the burrowing owls. The older female, Chloe, was sent to another AZA zoo in the fall of 2021 to be paired with a potential mate. The current pudu pair shares the habitat with toco toucans and red-footed tortoises, who are also native to South America. Both the toucans and tortoises are off habitat and will return when the weather warms this spring. As the pudu settle into their new home, there may be the clickity clack of tiny hooves in their future; another step towards Brandywine Zoo's commitment to the conservation of wild animals and the places they call home.



#### **Welcome Haechan!**

Have you *herd*? There's a new pudu in Wilmington! Haechan, a four-year-old male southern pudu, arrived in the fall of 2021 to establish the Zoo's first breeding pair for the species. He joined Clover, a two-year-old female, who arrived with her mother from the Jacksonville Zoo last spring. As pudu typically separate from their moms to establish their own territories and breeding opportunities, the young pair is in the prime. Learn a little about two of the Zoo's newest residents:

#### Meet Haechan (pronounced Hae – Chan):

• Birthday: December 19, 2018

• Birthplace: Los Angeles Zoo and Botanical Gardens

• Parents: Steph (mother) and Mario (father)

• Current weight: 9.6kg or 21.2lb

· Personality: Laid back,

• Favorite foods: alfalfa hay and sweet potato

 Namesake: Haechan (nee Lee Dong-hyuck), of the K-Pop band NCT-197

#### **Meet Clover:**

• Birthday: May 22, 2020

• Birthplace: Jacksonville Zoo and Gardens

• Parents: Chloe (mother) and Ren (father)

• Current weight: 9kg or 20lb

• Personality: Energetic, curious

Favorite foods: alfalfa hay and blueberries



## Urban WILD: Another WILD Year

#### **Brandywine Zoo's Camera Trapping Projects**

By Abigail McBride, Conservation Research Technician

Each year, we lose more wild spaces to urbanization and more people are calling these urbanized areas home. Cities are typically not built with wildlife in mind, but nevertheless, they still contain important habitat. Many animals have been able to adapt to the opportunities that come with urbanization, however there are still obstacles to city living. As cities become the fastest growing habitat on the planet, it is worth investigating how wildlife uses these spaces and the human-wildlife interactions that come along with sharing these spaces.

Since 2017, the Brandywine Zoo's Urban Wild project has been monitoring urban wildlife across New Castle County, DE and southeastern Pennsylvania. Focusing primarily on urban terrestrial mammals, this program consists of a number of camera traps across New Castle



County, with additional satellite cameras at select locations of interest. The data collected from our cameras is shared with a number of international research projects,

which resulted in several publications using Wilmington data in 2020-2021. This program mainly relies on volunteer community scientists for camera deployment and data tagging.

Our primary passive monitoring camera trap project is in partnership with Lincoln Park Zoo's Urban Wildlife Institute, which coordinates Urban Wildlife Information Network (UWIN), a network of 42 and counting cities across North America and Europe. Our part of this network monitors terrestrial mammal populations using

camera traps at more than 30 locations across New Castle County, DE, and Chester County, PA. We also conduct an annual survey each September to submit to Snapshot Mammal (formerly Snapshot USA), a terrestrial mammal study, which is coordinated



through the North Carolina Museum of Natural Sciences and the Smithsonian Conservation and Biology Institute.

With the data collected, we aim to better understand species diversity in urban environments, how animals change their behavior patterns in regard to levels of urbanization, and how this impacts spatial ecology.



In understanding what species are most common (or uncommon), by the level of urbanization, as well as when they are most active, we hope to inform conservation and land use decisions, maximize positive human-wildlife interactions while limiting conflicts, and better connect communities in general to the wildlife living right in their own backyards.

In spring, 2021, we piloted, with 11 other UWIN cities, the codeployment of AudioMoth acoustic monitors at camera sites. These were deployed as a beta test as the network looks to expand beyond mammal surveys with cameras. Our devices were set to a frequency to detect songbirds and deployed during peak spring migration for a period of two weeks. By collecting the audio calls from songbirds, we increase the likelihood of identifying all species that were present in the test site. The Zoo has also been using our 3D printer by testing and designing 3D printed cases for the AudioMoths. These cases will protect the delicate AudioMoths while they are deployed. Finally, we launched an iNatualist project to collect coyote sightings in Delaware, called Delaware Coyotes.

Great thanks to our team of community science volunteers who contributed almost 300 hours to Urban Wild this year, deploying cameras and tagging data! If you want to get involved in

our Urban Wild projects, check us out at https://brandywinezoo.org/conservation/urbanwild/ and sign up to be a conservation volunteer!

#### **Important Links:**

https://www.inaturalist.org/projects/brandywine-zoo-urban-wild

https://naturalsciences.org/calendar/news/snapshot-usa-first-ever-nationwide-mammal-survey-published/

https://www.lpzoo.org/science-project/urban-wildlifeinformation-network/



## Scouts and the Brandywine Zoo

By Meghan Hoopes, Education Programs Coordinator

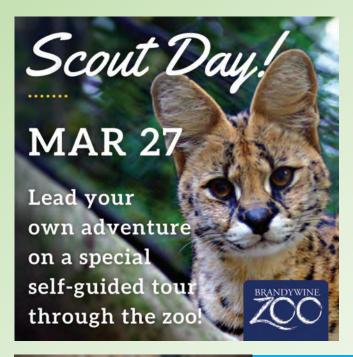
After two long years, Scout Night is back! This after-hours event is exclusively for Boy, Cub, and Girl Scouts and their families. Scout Night is March 26, 4:30 – 7 pm. Join us for exciting activities, an up-close look at some animals, and stations around the zoo to help scouts work on badge and adventure requirements. Whether your troop or pack is looking to get a kick-start on their badges and adventures, or you're just looking for a fun group activity, Scout Night is a fun-filled evening for everyone! Pre-registration is required, so be sure to plan ahead!

If you're looking for a more laid back opportunity for scouts to have some fun, we will also be hosting Scout Day on March 27 during the Zoo's open hours 10 am – 4 pm. Custom activity booklets will be available for Daisy, Brownie, and Junior Girl Scouts, and Lion, Tiger, Wolf, Bear, Webelo, and AOL Cub Scouts. Each booklet will lead scouts to self-guided activity stations

and give them a head start on earning their badges and adventures. These activity booklets take around one to two hours to complete and are great for a troop to do together, or a family to do on their own!

If your troop or pack is looking for a private event, the Brandywine Zoo also host Scout Workshops. Each workshop focuses on completing as many requirements of one badge or adventure as possible, and includes the opportunity to meet some of ambassador animals up close! Workshops are available for many different badges and adventures. Plus, groups can choose to work with our scout coordinator to create a custom program which are great for groups with a mix of age levels!

For more details about all of these amazing programs, please visit our scout page on our website at **Brandy-wineZoo.org/Scouts**, or send us an email at **Education@BrandywineZoo.org/** 







Toucan FACTS

Toucans sleep on their beaks so that they can stay warm, because they manage their body temperature by adjusting the blood that flows to their beak.

### **VolunTEENs**

By Meghan Hoopes, Education Programs Coordinator

We are pleased to announce that our VolunTEEN program is accepting applicants! The Brandywine Zoo VolunTEEN program offers teens ages 14-17 the opportunity to gain valuable experience in the education and zoological field. VolunTEENs can take on many responsibilities in the zoo as Camp Counselors Assistants, Barnyard Monitors, and Exhibit

Interpreters.

Camp counselor assistants help our Zoo Camp Staff with on-site day camps. Counselors will help lead activities and games, assist staff with managing campers, and contribute to an overall FUN and educational camp for our campers! Barnyard monitors assist zoo guests in friendly interactions

with the goats during their visit. This includes educating guests about the goats, and showing them how to gently interact with the goats. Exhibit interpreters have the unique responsibility of providing a fun, interactive, animal-themed learning environment for our zoo guests of all ages. Zoo Naturalists will perform informal learning presentations throughout the zoo,

and help to educate our guests about the wonderful animals that call the Brandywine Zoo home.

We are accepting applications for this competitive program until March 27! Visit our volunteer page on our website at **BrandywineZoo.org/Volunteer** for more information and a link to the online application.







## Clues at the Zoo

By Meghan Hoopes, Education Programs Coordinator

Warning: guests of the Brandywine Zoo should be on the lookout for the notorious thief The Raptor! Her team pulled off the sapphire heist at the New Brandywine Bank during our Clues at the Zoo event last October, and rumor has it she's planning another big job soon. We only hope that she doesn't strike again at our next Clues at the Zoo event on May 15!



If you enjoy escape rooms, solving puzzles, and having a good time, join us after-hours on May 15 for a special escape room-style adventure! Grab your friends and family (we recommend those 15 years or

older!) and get ready to hunt for clues and solve some puzzles throughout the zoo.

October's Clues at the Zoo event was the first of its kind hosted by the Brandywine Zoo, and we are bringing it back by popular demand! Feedback from zoo and Delaware State Parks employees, and from our wonderful guests who participated in October, is being used to make May's Clues at the Zoo even better than the first.

If you've got a young detective at home, be sure to look out for our summer Clues at the Zoo event in July, which will be designed for kids of all ages!





# SANTA at the 2001



## The DEAI Committee

By Janey Kramlik, Lead Keeper/Veterinary Technician

The Brandywine Zoo strives to reach all members of our community. Our efforts are being led by our Diversity, Equity, Accessibility, and Inclusion (DEAI) Committee. The DEAI Committee has been hard at work looking at how we can increase awareness of staff and volunteers, diversify our staff, and meet the needs of our visitors. If you have ideas on how we can be more inclusive, please send us your thoughts at education@brandywinezoo.org!

Here are a few of the sources that we have shared with staff:

Resource Format	Title	URL
Article	Ibram X. Kendi Walks His Talk With 'Be Anti-Racist' Podcast	https://tinyurl.com/4uwshzjj
Book	Demystifying Disability: What to Know, What to Know, What to Say, and How to Be an Ally	https://tinyurl.com/2p9ewspw
Instragram account	@shinanova (an indigenous lnuk woman)	https://tinyurl.com/mum7vjnh
Podcast episode	Ologies: Neuroendocrinology (SEX & GENDER) with Daniel Pfau	https://tinyurl.com/yc3nefzk
Video	Social Inequalities Explained in a \$100 Race	https://tinyurl.com/y6et6b2r
Website	Birdability	https://www.birdability.org/ what-we-do



We are BUZZING with excitement over our Bee Sweet fundraising campaign and need your help to name at least 250 of the bees in our bee exhibit! We're accepting names through March 1, and will name the Queen bee on March 4.

Learn More Here - https://brandywinezoo.org/support/bee-sweet/

## Supporting Partners: Thank you for your support!











































## Thank you for your support Annual Fund Donors!

On behalf of the Board of Directors of the Delaware Zoological Society and the animals at the Brandywine Zoo, thank you for your generous donations!

Each donation to our annual fund directly helps us provide innovative programs for children and young adults. Every donation also helps us upgrade the habitats for the animals here at the zoo and advocate for their counterparts in the wild.

Many thanks once again for Going a Little Wild and making a BIG difference at the Brandywine Zoo!

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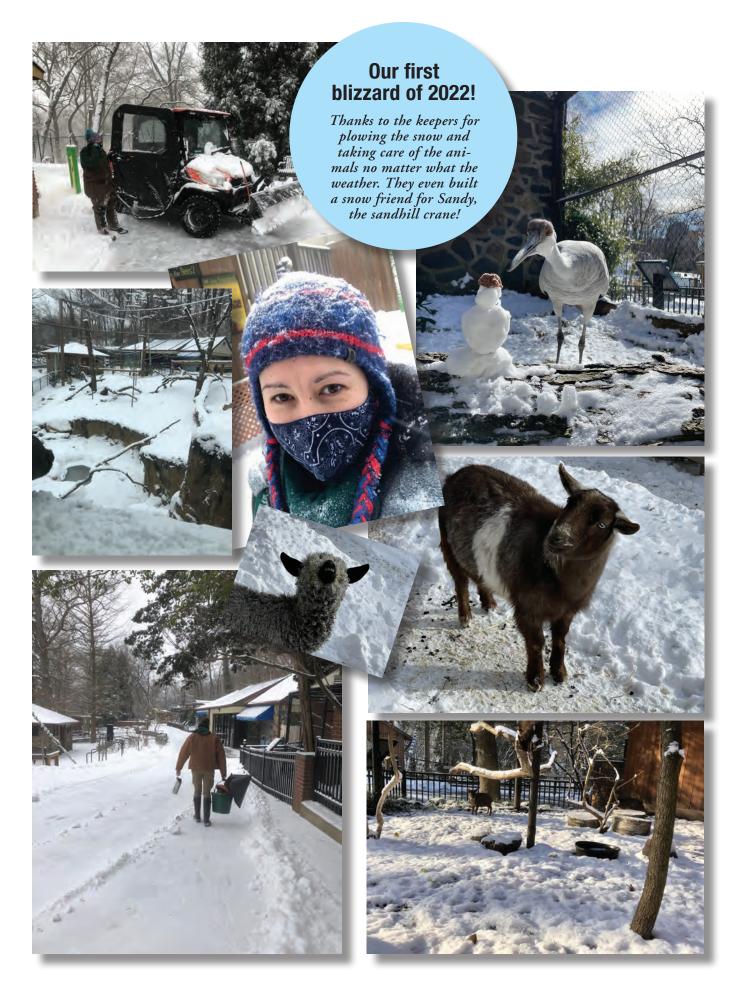
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Please let us know when you move; don't miss special invitations and Zoo News. Email to memberships@ brandywinezoo.org or call 302-571-7788 Ext. 215.

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**Upcoming Events & Programs** 

Scout Night	March 26
Scout Day	March 27
Earth Month Virtual Field Trip	Apr 6
Clues at the Zoo	May 14
Member Night	May 18
Endangered Species Day Virtual Field Trip	May 18





Club Zoo Camps

A Day in the Life Workshops

Little Nature Explorers, Spring Sessions

For dates and more information, visit our website at BrandywineZoo.org