

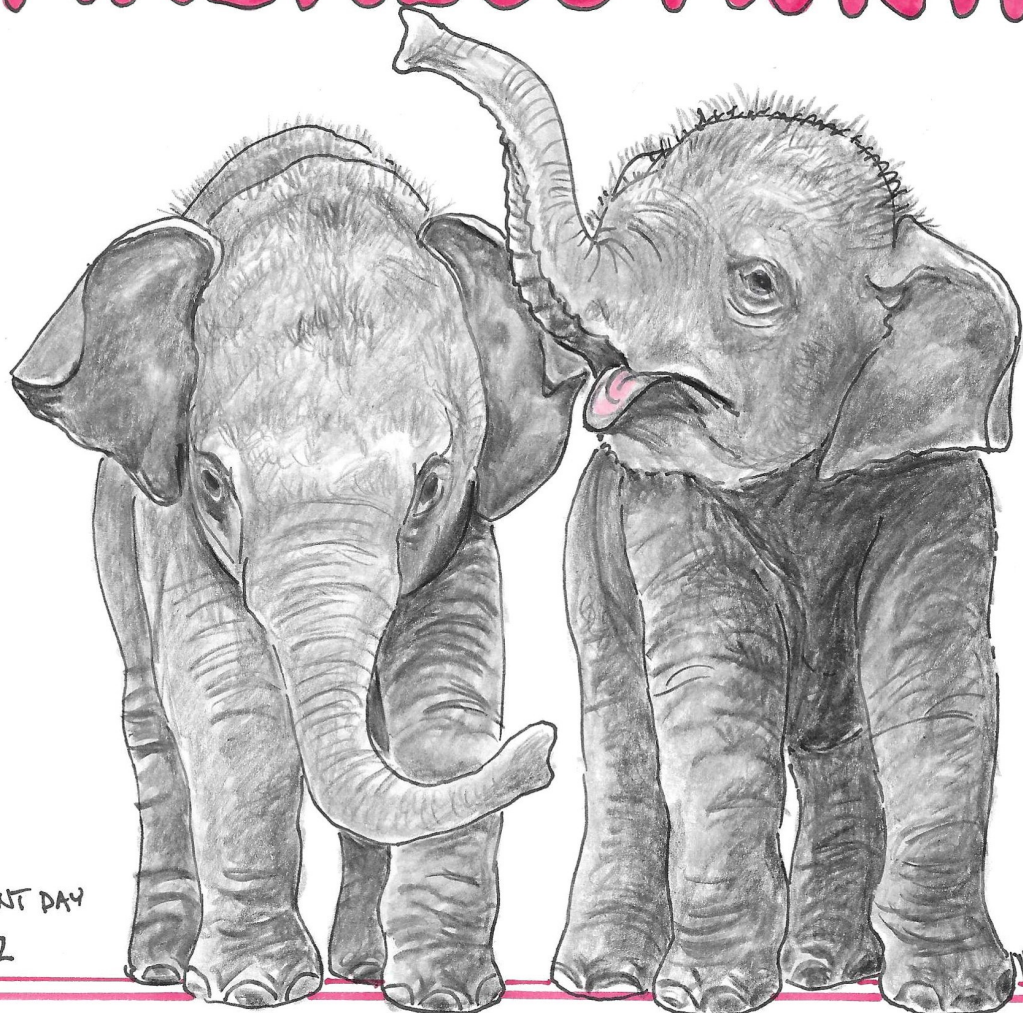
August 2022

The Columbus Zoo
and Aquarium
Volunteer Newsletter

ZooNews



AUGUST IS ASIAN ELEPHANT AWARENESS MONTH



WORLD ELEPHANT DAY
AUGUST 12



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The mission of ZooNews is to promote awareness, education, preservation and conservation of our natural world.

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FROM THE PRESIDENT AND CEO



Greetings,

With summer winding down, I wanted to share a few updates with you. It has been a great summer so far at all of our parks, with either attendance and/or revenue up across the board. At The Wilds and at our Safari Golf Club, attendance is up over projection. At Zoombezi Bay and at the Zoo, attendance is slightly below projection, however, revenue is above budget.

We continue our work on our new Strategic Plan. Going forward, our number one pillar of activity at both The Wilds and the Columbus Zoo will be a renewed commitment to animal well-being, wildlife research and conservation, and amazing new educational experiences for our guests and students. Another major focus will be to ensure our long-term sustainability. The Columbus Zoo came into existence nearly 100 years ago, and the decisions we make today and tomorrow will ensure that this institution will thrive over the next 100 years. Sustainability can take many forms; these include environmental, financial, our animal populations, our leaders, and more. Being thoughtful about what we want to accomplish over the next three, five and ten years will provide a solid foundation for the next 100 years.

Once we complete our Strategic Plan, we will begin work on our new Framework 2030 master plan. The Framework will guide our construction efforts over the next eight years, at all our properties. Our long-term goal is to create a year-round destination, both at our main location here in Powell, and at The Wilds in Cumberland. Stay tuned for more updates, it's a very exciting time!

Tom Schmid, President/CEO

Tom Schmid photo courtesy of Graham S. Jones

Communiqué

The AZA SAFE Asian Elephant program is promoting Asian Elephant Awareness Month, which takes place during the month of August with the goals of:

- Heightening awareness of Asian elephants and the work being done for them
- Encouraging the public to join zoos in the conservation of Asian Elephants

You can learn more by following AZA SAFE Asian Elephant on Facebook and [Instagram](#) and help spread the word by sharing their posts. #AsianElephantAwarenessMonth.



These are the themes they will be posting about:

- Week 1 - Why Asian elephants?
- Week 2 - Why we are protecting Asian elephants
- Week 3 - How we are making a difference for Asian elephants
- Week 4 - What you (members of the public) can do
- Week 5 - Thank you

Adam Felts and Danielle Ross are actively involved in the AZA SAFE Asian Elephant program, which is utilizing the knowledge and resources of participating organizations to help create a registry of elephants from the 13 range countries where Asian elephants live. The data collected from this registry will enable conservation efforts to be more productive and impactful.

Elephant Endotheliotropic Herpesvirus (EEHV) monitoring and treatment is another important conservation initiative in these range countries, as well as in Zoos. The Columbus Zoo has been working toward the creation of a new lab to monitor the elephants in our care for this virus. Regular monitoring can provide the key to successfully treating elephants with EEHV. The lab should be operational soon, a coincidental, but fitting way to recognize Asian Elephant Awareness Month.

We know that as engaged volunteers you are crucial in sharing these stories of conservation with our community and we are so appreciative of your dedication. Thank you for joining us in observing Asian Elephant Awareness Month.

<https://www.aza.org/connect-stories/stories/aza-safe-asian-elephant-awareness-conservation>

Ginger, Carole, Mary, Kathy and Rachel
The Volunteer Team

ZooNews Index

Just a reminder about where to find the Newsletter Index if you are looking for articles in ZooNews. Go to the Portal, to Newsletter and click on Zoo News Index - Animals 2010— with an Update Date of January 9, 2022. It is organized by regions and animals and is easy to use.

Be a “Super-Volunteer”

Whether you are a new or experienced volunteer, there are some reminders that may improve “your game.” Hopefully some of these may help.

Nervous?

Direct your stage fright into energy and your style or delivery. Breathe. Slow your delivery down. Speak loudly enough to be heard but not to overpower small shy guests. Vary your voice tone and speed of delivery. Ask questions.

Be approachable.

Use the “10 and 5” rule. When ten feet away, make eye contact and smile. At five feet away, greet guests. Use good posture. Keep your body language open and welcoming. Smile. Laugh! Have fun!! Enjoy yourself and the guest will get that. Use eye contact to engage and assess your guests. Don’t force-feed information – note if the guest wants to know or is just passing through. If he/she seems bored or distracted, pause and start again with a fun fact or unusual observation.

Be prepared.

Do a quick walk-through of the region and note what animals are out and active. Dress professionally and you’ll be treated that way. Bring your notes and don’t be afraid to consult them or to say you don’t know. Know your information. Identify a few unusual or fun facts and learn them. Sometimes a fun fact turns the guest who really isn’t listening or is distracted into one who will

engage. Study and review as much as possible. Practice and rehearse, rehearse, rehearse!

Be active. (Don’t wait around for someone to approach you.)

Get conversations going. Invite comments about the activities of the animals, the weather, the guest’s visit.

Examples: What do you think is going on here? Are you familiar with this exhibit? Are you from the Columbus area? May I help you? What have you liked best and why? Did you see/learn something you did not know or expect? What surprised you the most and why? Also you will want to mention the guest might not want to miss the baby... or Have you seen the sea lion training demonstration? It starts at...

Talk to kids.

Avoid contradicting adults in front of children. Note the interests and attention spans of the kids. Get on their level if

possible. Start with the concrete, for example: Can you tell me one thing about this animal? What kind of animal is this? Where might it live? What do you see it doing? Move to more abstract questions such as: How might its feet help the animal get food? What helps the animal move, eat? How do you think the animal can live where it is so cold? Can you think of other animals that catch their food in a similar way? How else might those adaptations help the animal? Imagine if you had feet like that animal, what could you do?



Oops!

If someone does something “wrong” and is not dangerous for the guest or animal, explain nicely why they should stop. Relate the behavior to the guest’s life as in “What if your brother or sister knocked on your door constantly while you were playing a game or doing homework – how would that feel?”

Irritated guest?

Use a simple response. Discuss a brief action you could take to report the problem they bring up and follow up. “I’ll check on that for you or I’ll let a keeper know.” Have a pencil and paper and make notes so you remember and they see you are intending to act. Taking an extra step can calm them and lets them see you are making a real attempt to rectify the situation. Thank them for sharing their thoughts. “Sorry” only helps if it is sincere.

Express gratitude and look on the bright side.

Examples of comments: It’s too bad the weather isn’t better, but we’re so glad to see you here at the Zoo. Good morning, welcome to the Zoo. Enjoy your visit. What a great day to be at the Zoo. Thank you for choosing to visit our Zoo. Enjoy the rest of your day. Nice talking with you. Come back soon.

—Juliann Breeding

Sources: I’m Glad I’m Here, I’m Glad You’re Here (Association of Zoos and Aquariums *Symbiosis*). August 2002. And (The Columbus Zoo and Aquarium Volunteer Newsletter *Zoo News*). July 2008; “Communique”. The Columbus Zoo and Aquarium Volunteer Newsletter *ZooNews*. Nona Hunt, April 2006; “Great Customer Service”. The Columbus Zoo and Aquarium Volunteer Newsletter *ZooNews*. Sue Allen, April 2009.

COLUMBUS ZOO FAMILY OF PARKS



COLUMBUSZOO.ORG



What's the Big Deal About Kittens?



They're unbelievably cute and fun to watch ... three small bundles of soft, gray fluff that pounce, wrestle and stalk, so young they haven't yet developed the stern somewhat grumpy look and intense glare of their mother Tiina. The yet unnamed Pallas' cat's kittens are a welcome addition to the Columbus Zoo family, but they're kittens after all ... kittens that are growing quickly and will be adult size by Christmas.

What's the big deal about kittens? Let's take a look ...

This is the first surviving litter of Pallas' cat kittens conceived via natural breeding in the 16 years this species has been at the Zoo.

Pallas' cats are a Red SSP as there are only 63 individuals in 21 North American institutions including 8 breeding pairs. Our litter is one of two in the US this year. This was the first breeding for both Tiina and Moose, their success has national implications of moving the number of cats toward a more sustainable level.

The seasonal reproductive physiology for Pallas' cats is controlled by light exposure. Females are receptive for only *48 hours a year* and males are capable of producing sperm for only five months a year making timing critical for successful breeding. The closure of the Pallas' cat exhibit to guests from December to March is to mimic annual seasonal changes of their native range and make their zoo habitat as undisturbed by light and noise as possible. Tiina, new to the Zoo, had been out of quarantine only a few days when introduced to Moose last winter. Luckily, they were compatible and hit it off, much to the credit of the Asia Quest staff.



SMALL CAT BASICS

The Pallas' cats and the other small cats that live at the Zoo might look like miniature versions of their larger cousins but their uniqueness is striking and worth discussion.

75% of the world's 37 cat species weigh less than 45 pounds, five of these can be seen at the Zoo. The largest of our small cats, the Canada lynx, weigh around 30 pounds.

Despite huge variation in size, a striking example of which can be seen in Asia Quest where Pallas' cats and Amur tigers live side by side, all cats share a predatory lifestyle, similar body and skull shapes and are considered variations of a common theme.

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Small cats occupy a greater range of habitats and space than large cats and eat a more varied diet. Tree dwelling cats consume primarily birds and eggs; cats living near water prey primarily on fish, amphibians and snakes; terrestrial small cats are often generalists, eating mainly rodents and small mammals.



Small cats and large cats can co-exist in some habitats

because their diet is different or they are active at different times of the day. The lions, cheetahs, leopards and servals at the Zoo are a prime example, all living on the savannas of eastern Africa.

There is a direct correlation between the size of the cat and the size of its prey.

Larger cats must take larger prey, possibly larger than the cat itself. For smaller cats prey size is often less than 10% of the cat's size and they have to catch multiple prey every day while avoiding being prey themselves. The Pallas' cat, for example, hides in rocky and dens to avoid being taken by owls, hawks and wild dogs.

Big cats also have a larger foraging radius than small cats.

Small cats provide an underestimated ecosystem service to humans. Many species prey on rodents that pose a direct health threat to humans and damage grain crops.

The smaller species rely more on their hearing to hunt. Small cats are particularly adapted to hearing high frequency and soft sounds. Very large external ears, tufts of hair on the ears and the large convolutions on the inside of the ear, all obvious when looking at our small cat residents, assist in their tracking of prey. Their hearing is so acute they can hear the vocalizations of rodent prey underground.

All cats require regular source of animal food and cannot survive in areas when seasonal food shortages exist.

Because they need a large range to find adequate prey, cats are especially vulnerable to habitat destruction. Species such as the Canada lynx, Pallas' cat and serval are specialist feeders, preying primarily on one species. If the prey disappears the cat is not likely to survive.

Many small cats are secretive and nocturnal. Low population densities make it hard to determine exact numbers, very few of the small cat species have been studied in the wild and much of what we think we know is a rough approximation.

—Nancy Mulholand

Sources: Felid TAG of AZA.org; Sarah Kirkman, Columbus Zoo and Aquarium; Cincinnati Zoo; Felid TAG Times, Summer 2021; Small Wild Cats, James Stevenson and Patrick Watson, John Hopkins Press, 2011

Photos courtesy of Cindy Wesney

Rhino Research at The Wilds

Research Efforts to Improve Rhino Care

The Wilds, in collaboration with the Cincinnati Zoo and Botanical Garden and four other research partners, is serving as an “operations base” for the *American Institute of Rhinoceros Science* (AIRS). The Wilds On-site Project Director will be Dr. Parker Pennington, a reproductive physiologist specializing in species-specific reproductive physiology in rhinoceroses. At The Wilds she will oversee project management including sample collection and data analysis as well as continuing her research into reproductive dysfunction in white and black rhinos.



Photo courtesy of Graham S. Jones,
Columbus Zoo and Aquarium

AIRS is a cooperative research venture funded by a 3-year National Leadership Grant from the Institute of Museum and Library Services (IMLS). IMLS defines zoos as ‘living museums’ and thus serves as a unique funding source for research efforts such as AIRS, which has potential benefit to the survival of rhinoceros populations internationally. This collaborative effort serves as a unique research model involving the collection of research data from rhinoceroses *ex situ* (outside of their natural habitat). The objective of the research is to collect and analyze a large amount of research information, ideally from most or all institutions that house rhinoceroses in North America. The database will be broadly disseminated. According to Dan Beetem, Director of Animal Management at The Wilds, practices across institutions vary and there are insufficient empirical data upon which to base best practices. AIRS projects are guided by the Rhinoceros Research Council’s (RRC) Rhino Master Plan, which has articulated four broad research objectives (pillars). The overall goal is aimed at collecting empirical data to inform the practices in those institutions that house rhinoceroses.

Rhino Species’ Specifics

There are five species of rhinoceros: black, white, Sumatran, Javan, and greater one-horned. Of these, white, black, and greater one-horned (~ 365 rhinos in all), are maintained in AZA-accredited zoological institutions and also exist in the wild. The IUCN designates that the black rhinoceros (*Diceros bicornis*) is *Critically Endangered*, the southern white rhinoceros (*Ceratotherium simum simum*) is *Near Threatened*, and the greater one-horned rhinoceros (*Rhinoceros unicornis*) is *Vulnerable* (IUCN, 2020). The Sumatran rhinoceros is managed in its native habitat and the Javan only exists in the wild; both are *Critically Endangered*. A sixth taxon, the northern white rhinoceros, is *Critically Endangered* and is functionally extinct. The number of mature individuals for each of these species is listed in Table – 1. Major population threats include habitat fragmentation, poaching, hunting, and illegal trade. An increase in illegal acquisition of rhino horns has been recently documented. The IUCN Species Survival Commission (IUCN SSC), African, and Asian Rhino Specialist Groups reported recovery of 8,691 rhino horns going into illegal trade between October 2012 and December

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2015 - 90% of these were from illegal poaching. Along with other efforts to protect these species (such as systematic monitoring, international management and trade controls, and provision of conservation sites) *ex situ* conservation is important in order to maintain/increase a genetically diverse population and may be the only way to prevent extinction.

Table – 1: IUCN Estimates of the Current Population Numbers in the Wild (2020)

Species	Number of Mature Individuals
Southern White	10,080
Black	3,142
Greater One-Horned	2100-2200
Sumatran	30
Javan	18
Northern White	0-1



Research Process

The Wilds' rhinoceroses will participate in most of the activities under the AIRS project. In addition, AIRS partners will recruit participants from all AZA zoos holding rhinoceroses. The majority of the AIRS project is focused on the *ex-situ* rhinoceros population; however, for some of the research objectives, samples from wild individuals will also be analyzed. The research projects will focus on the following four RRC research priorities (pillars): **physical fitness** and its relationship to overall health, **iron storage** in browsing rhinos, **reproductive success**, and **behavioral and environmental factors** and their relationship to health. All of the projects are interrelated and data from each will be analyzed in relationship to how they interact and contribute to overall health.

Specimen collection (blood and fecal) has begun at The Wilds and more active training is in progress to prepare rhinos for voluntary sample collection when possible. The Wilds is a unique facility due to the large number of resident rhinos [17 southern white (5 males and 12 females) and 5 greater one-horns (1 male and 4 females)] and the fact that rhinos are able to graze freely in summer and return to holding barns in winter. This sets up an excellent research design for comparing variables under two very different conditions, one similar to life in the wild and one similar to that of most other rhinos in human care.



One pillar of the research is physical fitness. Male and female white and black rhinos (n=80) from AZA- accredited facilities will be requested for this arm of the study. It is well established in human medicine, that measures of fitness, such as body fat content and activity level, relate to overall health/disease. It is the objective of this research pillar to determine if similar corollaries exist in the rhino study population. Measurements of health will include assays for metabolism, energy balance, and

inflammation, while measures of fitness will include body fat and changes in resting heart rate and activity levels over time. Activity levels and heart rates will be measured by fitness trackers (accelerometers) designed specifically for use with rhinos. A second arm of this pillar will seek to identify contributions of factors in the managed environment (such as time in pasture, browse availability, diet, and enrichment supplements), foot health, and fertility to physical fitness. Data on relationships between fitness, environment and overall health are important for the development and refinement of protocols for rhino care. Accurate and reliable measures of fitness developed in the study will be useful tools for those institutions housing rhinos.



Another pillar of the research is that of wellbeing. Wellbeing is a complex construct, which includes variables in five domains: nutrition, physical health, environment, behavior, and mental state. While some measures have been validated in rhinos, additional research is necessary. Using accelerometers and heart rate measurements, live and video observations, keeper ratings, survey data, and physiological data (such as serum cortisol levels), relationships between wellbeing and environmental conditions such as group size, browsing opportunities, frequency of training and enrichment and degree of choice will be studied.

All four research pillars are closely interrelated, and relationships will be analyzed. Data from the four research pillars will be provided for all AIRS members and be available for analysis, interpretation, and translation into practical managed care protocols.

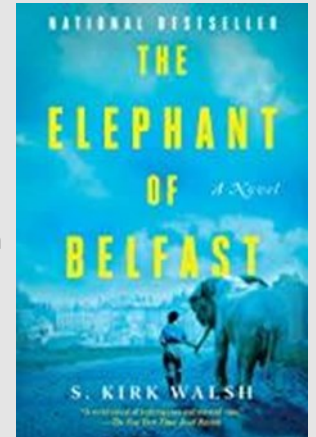
— Sally Rudmann

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Book Review: The Elephant of Belfast

The Elephant of Belfast was inspired by the true story of Denise Austin, known as the Elephant Angel, a Northern Irish zookeeper known for keeping Violet, an elephant calf from the Belfast Zoo, in her backyard during World War II. She was also the first female zookeeper to work at that Zoo.



In the novel, Hettie Quin is the zookeeper at the Belfast Zoo. So many young men have been called up as soldiers that Hettie, now 20, has gained her life's dream to be a zookeeper, a career not usually available to women. The story, set in 1941, begins when Hettie meets Violet, a 3-year-old elephant, at the Belfast docks as she is unloaded from a steamship after a long sea voyage from Ceylon. She helps guide Violet on the long walk to the Zoo, but not without mishap.

When the Luftwaffe targets Belfast, authorities decree that all dangerous animals must be shot to protect the public in the event of their escape. Violet's name is on that list. When the shooting is halted for the day to find more potent ammunition for the elephants, Hettie resolves to save her beloved Violet against all odds and creates a sensation when she walks the animal home to stay in her backyard. The constable comes looking for Violet, so friends help Hettie move the calf to a safer refuge. Over time, Hettie and Violet form a deep bond.

The story is about the effects of war on Hettie and her relationships with her family, friends and the elephant under her care.

—Sheila Campbell



Rhinos

Brian, our Greater One-Horned Rhino, has the lone horn. It can reach 21 inches in length!



Wet and Wild Adventures



If you have not watched the presentations at the Adventure Cove Lighthouse Theater YOU ARE MISSING OUT!! I'm referring to the Training Tales Presentation starring our sea lions at 10am and Dive into Adventure starring many of our Animal Programs friends at 12 pm and 4 pm. Both of these short, 15-to-20-minute presentations are high energy and educational with a fun twist. They give a short conservation message and show off our animals and their personalities to sway hearts.

Training Tales trainers literally run back and forth to keep sea lions Sunshine, Columbia and Lovell interested and having fun as they show off their responses. The pinnipeds target on many levels, thrilling the audience with high jumps, fun circles and rock climbing. The trainers help the audience see that the behaviors are stimulating and fun as well. They show some behaviors that are needed for the animals' care such as opening the mouth and holding still for a dental x-ray. Some children from the audience get to participate, asking for the behaviors with hand and verbal signals. Lovell sea lion recycles a can as the audience members have a chance to donate and receive a conservation pin, adding to the \$15,000 donated last year to rescue and help stranded pinnipeds in their native ranges. As the audience leaves, the trainers stay so audience members can ask questions of them.

Dive Into Adventure presentations keep the animals moving through natural and exciting behaviors in a manner reminiscent of the Animals on Safari Show of past

years. At one presentation we laughed and found out why Kevin, a red-legged seriema, slams a plastic alligator on a rock. Do you know why small-clawed otters dive under water make bubbles or how an Indian porcupine warns predators? Whew! One child in the audience was glad she did not have to wear Monty the ball python as jewelry like ancient Egyptians did. The Toco toucan did his job to recycle cans to illustrate a conservation message that rainforest trees are destroyed in order to mine the metal for cans. Do you know why his large beak does not weigh him down? He was a little reluctant to go home, which further endeared him to the audience.



The best part of being able to donate, adding to the \$20,000 donated last year to help animals in their native ranges, is that audience members can present their donations to Jewel, a blue and gold macaw. Upon leaving, audience members are able to see the animals and trainers up close for questions.

Both presentations are well worth your time to see and certainly should be mentioned to visitors, as the presentations may be a highlight they remember and possibly act upon to help animals in their native ranges.

--Juliann Breeding

Many thanks to our training staff in Animal Programs and region leader Jennifer Davis.

Photos courtesy of Jane Cirigliano

What's the Score?

Assessing the Body Condition of the Zoo's Cats

Visitors frequently comment that many of the Zoo's large cats look too thin, implying they are under-weight or malnourished. They aren't! Comments like these lead to discussions about weight, diet and fasting for some cats, and provide an example of how the keepers evaluate the condition of individual animals.

Maintaining a proper weight is one of the key things we can do to stay healthy, possibly ward off disease and maintain an optimal quality of life. It's no different for the animals at the Zoo; they can be overweight, even obese, if there isn't a balance between calories consumed and energy expended. The initial question in this discussion is, "How do keepers decide what is the optimum weight for an animal so that the proper diet can be formulated?"

There is no ideal weight for a particular animal; body size, gender and time of the year can all affect weight; however, there is the Body Condition Score (BCS) system. Body condition scoring is a visual evaluation of specific body regions and skeletal structures as a way to assess the condition, or fitness, of an animal. Systems are based on shape, silhouette, the prominence of skeletal features and the amount of fat and muscle overlaying various body parts. It's a simple, quick, non-invasive and standardized method to assess the condition of an animal when you can't get it on the scale frequently - if ever - or get your hands on the animal to feel the skeleton or fat coverage. Zoo keepers have adapted principles originally used with livestock such as cattle and horses to make objective decisions on weight and exercise. Scales exist for a wide range of animals from elephants to fish to giraffes. The large cats are scale-trained and are usually weighed monthly. Random body condition scores are used in conjunction with these regular weigh-ins as a means to improve the quality of animal care and, possibly, adjust diets.

When keepers perform a body condition score, they look at the cat from the side and pay attention to the shoulders, ribs, lumbar vertebrae and pelvic bones. The BCS system rates an animal on a five-point scale, the mid-point being the ideal condition, from emaciated to obese.



What does an ideal cat look like? The bony structures of the pelvis are visible but not prominent. The thigh muscle is obvious when the cat walks. The rear has a square appearance. Condition changes usually present in this area first.

Continued on page 14

What does an ideal cat look like?

- The overall appearance is well-proportioned; lean and muscular; there are obvious delineations between the shoulders, stomach and pelvic regions.
- Shoulder bones are visible.
- Ribs are not visible.
- There is an obvious waist, or abdominal tuck, and minimal or no fat pad on the abdomen. A pregnant female would have a rounded stomach.
- The bony structures of the pelvis are visible but not prominent. The thigh muscle is obvious when the cat walks. The rear has a square appearance. Condition changes usually present in this area first.

Some specifics:

The parameters fit any of the Zoo's cats, from the lanky adolescent cougars to the more heavily built and older lions and tigers.

Keepers work together scoring the cats and assessing their condition. If they agree a diet change is necessary, either up or down, the Animal Health, Curatorial Staff and Animal Nutrition departments make the final decision.

Diet adjustments are fairly easy to accomplish because the cats are fed separately and keepers know exactly how much food is consumed.

Diet adjustments might be made several times throughout the year. The cats are less active in the summer due to the higher temperatures.

The thick fur coats of the cats, such as the Pallas' cats or tigers, don't impact the ability of the keepers to score them.

Visitors frequently ask if they can see the cats eat. The cats are fed indoors, but often get bones in the outdoor yards. Bone day varies in different regions of the Zoo, but guests can see the lions and tigers getting small pieces of meat during the keeper talks.

—Nancy Mulholand

Sources: Felid TAG of AZA.org; Audra Meinelt, curator, Nikki Smith, asst curator, Heather Hunt, former keeper, The Columbus Zoo and Aquarium; Waltham Veterinary Diets,



Adventure Cove

Did you know that sea lion ears have a flap, but seal ears are only a hole?