

Carnivore and Ungulate Department Collection Plan



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Introduction

Since 1874, the Garden of the Zoological Society of Philadelphia has housed the largest of mammals including carnivores and hoofed mammals. Red Kangaroos, tigers, giraffe and puma were all part of what was a very exciting time in the history of Philadelphia. Since that first day 144 years ago Philadelphia Zoo has achieved longevity records, first captive births as well as innovative exhibit designs.



Today, a team of thirteen permanent keepers and six open relief keepers care for this collection. The skills and talents of the keeper staff are enhanced by continuing education opportunities such as travel to other zoos, access to past and current trade periodicals, presentations from other staff and outside guests and attendance at conferences.



Collection Planning Principles, Criteria and Considerations

1) Broadly, the Philadelphia Zoo's animal collection is developed to support the Zoo's vision and mission.

Vision statement: "We are caretakers of a world in which people and animals thrive together"

Mission statement: "By connecting people with animals, the Philadelphia Zoo creates joyful discovery and inspires action for wildlife and habitats."

2) More specifically, a set of criteria are used in collection planning across the entire collection, including the Carnivore and Ungulate team.

Two areas of evaluation can be considered "exclusionary":

- **Availability**
Species may rank highly in other criteria below, but are not, or are unlikely to be available through appropriate acquisition processes
- **Animal well-being**
The Philadelphia Zoo must be able to provide high quality care for all species in the collection. For any current species/individuals where this is of concern, planning should consider disposition. For any "new" species, inability to meet this criterion should exclude the species from consideration. Examples of areas of review:
 - Have or can provide appropriate staff and other resources to provide high-quality care
 - Climate-appropriate or ability to ameliorate climate
 - Can be housed in appropriate social grouping
 - Acquisition does not result in displacement of current collection to lower quality of housing

Three areas of evaluation can be considered "inclusionary". Species existing in or added to the collection should support one or more components of these criteria, and should be considered against alternatives that might more strongly support these criteria.

- **Mission**
The animal collection should be developed to most effectively support the Zoo's mission, including through the lens of our Theory of Change. Key considerations/opportunities in this regard include:
 - Effective ambassador for key Zoo messages – e.g. climate change, palm oil
 - Effective ambassador for Theory of Change – e.g. empathy development, opportunity for action
 - Species of conservation concern in the wild
 - Supports AZA RCP and SSP program recommendations/sustainability
- **Guest experience/business impact**
The animal collection must create guest appeal and a guest experience that supports the Zoo's financial well-being. Note that many of the same characteristics that support the guest experience also drives mission goals – exciting experiences that connect people with animals and create the conditions for engagement and behavior change. Specific opportunities/lenses include:
 - Gate driver/iconic: a sufficient representation of high-profile species that create a core experience that attracts attendance
 - Provide good/"reliable" guest experience
 - Reliably visible
 - High degree of activity
 - Social and colonial species more likely to create high visibility and activity

- Ability to be mixed with other species also supports this goal
 - Likelihood of breeding recommendations: for those groups in which a birth/hatching could create external awareness (also supporting staff development)
 - Supports guest engagement programs, including behavioral demonstrations, keeper talks, and behind-the-scenes programs
 - Maintains or increases species diversity
- **Philadelphia Zoo specific**
 - Given the Philadelphia Zoo's commitment to Zoo360 through both animal and guest experiences lenses, for exhibits where appropriate, consideration should be given to likelihood that species will use and benefit from Zoo360 trails.
 - Species that can be considered flagship species, in terms of institutional history, investment and expertise.

3) In addition to these collection-wide criteria and considerations, there are additional areas of focus specific to the Carnivore and Ungulate collection:

- **Climate:** Philadelphia's temperate climate permits the department to keep a wide variety of carnivore and ungulate species outdoors. The city's average summer highs and winter lows, 87°F and 26°F respectively, limit the times of year that certain species can be given access outside, and suitable climate controlled areas are always available.
- **Access to Zoo360 trails:** At present, the species that utilize the Zoo360 trail system are more dependent on their location in the zoo and relative access to the trails than anything else. Selection of future species will focus on those that can continue to utilize the trails to their fullest extent.
- **Ample space for natural social groupings and avoidance of aggression:** All species must be maintained in groupings that meet their social needs. They are housed within the Zoo's infrastructure at a population level that is both healthy and safe for all species within an enclosure. Crowding and sustained inter- or intra-specific aggression must be avoided and rectified whenever noted.
- **Predation and disease prevention:** While there is little concern regarding predation issues for carnivores; smaller ungulates must be protected from terrestrial predators when outside. Neighboring Philadelphia's Fairmount Park, the Zoo has a wide variety of wildlife that requires exclusion and management for the safety of the collection animals. In addition, ungulates must be protected from Johnes, which can be transmitted by other animals as well as transferred from humans.

Significant Recent Collection, Collection Management and Collection Planning Changes

Elephants: In 2006, Philadelphia Zoo made a decision to transfer its elephants to locations that were able to put greater immediate resources to their housing and care. Our last elephants left the Zoo in 2009. Although we had transferred all of our elephants out by 2009, we had done so with the stated intention of returning them in the future. A criteria-based 2016 analysis changed this intention, and a decision was reached that elephants would not be part of our living collection. This decision was based on animal well-being criteria as intersecting with financial and opportunity cost considerations.

Polar bear: In early 2018, our geriatric polar bear passed away, leaving the polar bear exhibit empty. There of course were significant issues of availability in replacing in-kind. After consideration of another bear species (e.g. grizzly bear), we decided to remodel the exhibit and relocate our Humboldt penguin colony, giving them a much higher quality exhibit that allowed them to expand their behavioral diversity.

Changes to Carnivore Kingdom: In 2018, we also completed significant “Zoo60-like” modifications to our 1992 Carnivore Kingdom, with one goal to provide more opportunity for fewer species. We merged and connected three separate exhibits, once housing three species, into a larger, flexible habitat for red pandas. We connected three other separate habitats, with flexibility to connect to a fourth, for giant otters. The collection plan and management changes associated with these modifications included: disposition of brown pelicans; eventual removal of black-footed cat, white-nosed coati and Canada lynx from the collection (all likely achieved through attrition) and opportunity to relocate and “upgrade” a second pair of giant otters from an off-exhibit space. We also vacated or repurposed two former animal spaces in Carnivore Kingdom as part of this project, after conclusion that there were not good criteria-based options for the existing spaces. At least one of these spaces may be re-engaged for animals in the future, likely through connection to one of the existing complexes.

Relocation of kangaroos and red river hogs: In 2017, we had an opportunity to upgrade habitats for both our red river hogs and red kangaroos. After relocation of a lone addax, we were able to move our red river hogs to a larger environment allowing for much increased rooting behavior. The move of the red river hogs (and loss of an older okapi) allowed us to merge separate habitats to create a larger space with better barns for our red kangaroo mob. The former kangaroo yard, never one of our higher quality animal spaces, and hard-to-find for our guests, is no longer used as an animal exhibit. We have repurposed the existing kangaroo barn as a tool/build area for keepers to develop environmental enrichment projects.

Facilities and Exhibits

The Philadelphia Zoo's carnivores and ungulates can be found throughout the entire Philadelphia Zoo. This includes Outback Outpost exhibit and barn, African Plains exhibits and barns, African Plains Phase exhibit and barn, Water is Life exhibits, Zoo360 and indoor holding, Cheetah exhibit and holding, maned wolf exhibit and holding, colobus exhibit and indoor holding, Bear Country exhibits and holding, Key Bank Big Cat Falls exhibits, holding and Zoo360.

Outback Outpost was built in the early 1960s and has undergone several renovations. In 2017 Outback Outpost had yet another renovation and it is the current exhibit of our red kangaroo and emu. This is a shared exhibit with attached indoor barn holding.

African Plains and African Plains Phase II are ungulate exhibits with connected indoor barns. They were built in the mid-1970s. There are (4) exhibits and (6) connected indoor barns. These exhibits currently house red river hogs, white rhino, zebra, giraffe and hippopotamus. The hippopotamus has a large outdoor pool and a large heated indoor pool.

Water is Life was built in the mid 1980's as Carnivore Kingdom. In 2017 it underwent renovations to improve exhibit size as well as add features for our giant river otters. This area houses Canadian lynx, red panda, giant river otters, coati and fossa. There are (3) pools within these exhibits, a waterfall, as well as Zoo360 overhead crossings.

Cheetah Run includes several exhibits and holding areas. The colobus exhibit built in 2003 has attached indoor holding. Cheetah and Maned Wolf exhibits both have indoor housing as well as outdoor runs connected to their exhibits.

Key Bank Big Cat Falls was built in 1949 and in the early 2000's underwent major renovations. It includes (5) exhibits, connected indoor holding as well as Zoo360 trails.

Bear Country was built in 1980's and underwent exhibit renovations to merge 2 smaller exhibits into 1 larger exhibit in 2015. In 2017 renovations included utilizing the polar bear exhibit for penguins. Currently Bear Country has 2 exhibits with connected indoor holding.



Carnivore and Ungulate Locations Around the Philadelphia Zoo

- A. Outback Outpost
- B. African Plains/Phase II
- C. Water is Life
- D. Cheetah/Maned Wolf
- E. Colobus
- F. Key Back Big Cat Falls
- G. Bear Country

Current and Proposed Changes to PZG Carnivore and Ungulate Mammal Collection Arranged by Order and Family

~~Strikethrough~~ indicates desire to disposition from collection, **bold** indicates interest in acquisition into collection.

Carnivore

Canidae

~~Maned wolf, *Chrysocyon brachyurus*~~

Bush dog, *Speothos venaticus*

Felidae

~~Black footed cat, *Felis nigripes*~~

~~Canadian lynx, *Lynx Canadensis canadensis*~~

Amur tiger, *Panthera tigris altaica*

African lion, *Panthera leo krugeri*

Amur leopard, *Panthera pardus orientalis*

Snow leopard, *Uncia uncia*

Puma, *Puma concolor*

Jaguar, *Panthera onca*

Cheetah, *Acinonyx jubatus jubatus*

Ursidae

Andean/Spectacled bear, *Tremarctos ornatus*

Sloth bear, *Melursus ursinus*

Mustelidae

Giant river otter, *Pteronura brasiliensis*

~~White Nosed coati, *Nasua narica molaris*~~

Eupleridae

Fossa, *Cryptoprocta ferox*

Ailuridae

Red panda, *Ailurus fulgens fulgens*

Ungulate

Perrisodactyla

Equidae

Burchell's zebra, *Equus quagga burchelli*

Rhinocerotidae

Southern white rhino, *Ceratotherium simum simum*

Artiodactyla

Suidae

Red river hog, *Potamochoerus porcus*

Hippopotamidae

Hippopotamus, *Hippopotamus amphibius*

Hippopotamus, *Hippopotamus amphibius kiboko*

Giraffidae

Giraffe, *Giraffa camelopardalis*

Reticulated Giraffe, *Giraffa camelopardalis reticulata*

Bovidae

Grants gazelle, *Nanger granti*
~~Mhorr gazelle, *Nanger dama mhorr*~~

Macropod

Macropodidae

Red kangaroo, *Macropus rufus*
Parma Wallaby, *Macropus parma*

Rodent

Hystriidae

~~Cape porcupine, *Hystrix africaeaustralis*~~

Primate

Cercopithecidae

Black and white colobus monkey, *Colobus guereza*

Outback Outpost TRY1



Outback Outpost/ TRY1

Common name	Red kangaroo	Scientific name	Macropus rufus	
Order	Diprotodontia	Family	Macropodidae	
Range/Habitat/Ecology	Distributed widely across the Australian continent in savanna, shrub land, grassland and open woodland habitats.			
Conservation status	IUCN: Least concern CITES: Not listed	Regional: Not listed USFWS: Not listed	Wild Trend:	Stable
Cooperative Programs	Yellow SSP			
Current Holding	1.7	Target Number	1.7	
Availability	Available within AZA.			
Animal Well-being	Relatively winter hardy and heat tolerant with simple care and housing requirements, require heated access during very cold temperatures.			
Guest Experience	Reliable guest experience, potential for BTS opportunity, mixed-species exhibit appropriate.			
Mission	Encourages joyful discovery			
Exhibits/Buildings	Outback Outpost (TRY/I)			
Recommendations and Rationale	As the largest marsupial species, red kangaroos offer a great educational opportunity to talk about the unique characteristics of marsupials. This species could potentially participate in a BTS experience. With our current space and age of collection consideration of adding another, smaller marsupial species could be beneficial.			
History at PZG	Reported at Philadelphia zoo in 1874.			



Outback Outpost/ TRY1

Common name	Parma Wallaby	Scientific name	Macropus parma	
Order	Diprotodontia	Family	Macropodidae	
Range/Habitat/Ecology	Found in forested areas of New South Wales.			
Conservation status	IUCN: Near threatened CITES: Not listed	Regional: Not listed USFWS: Not listed	Wild Trend:	Unknown
Cooperative Programs	Red SSP			
Current Holding	0.0	Target Number	2.2	
Availability	Available within AZA.			
Animal Well-being	Relatively winter hardy and heat tolerant with simple care and housing requirements require heated access during cold temperatures.			
Guest Experience	Reliable guest experience, potential for BTS opportunity, mixed-species exhibit appropriate.			
Mission	Support SSP			
Exhibits/Buildings	Outback Outpost (TRY/I)			
Recommendations and Rationale	Parma wallaby could be a good addition to the Outback Outpost mixed exhibit. As a red SSP this is a priority species for breeding or housing male groups. They would be a good species to educate our guests about introduction of non-endemic species, as predation from introduced feral cats and dogs. Minimal exhibit changes including adding a few shrubs/small trees would work well for them.			
History at PZG	None reported.			



African Plains D1, D3, B, A



African Plains/AP D1

Common name	Southern white rhinoceros	Scientific name	Ceratotherium simum simum	
Order	Perrisodactyla	Family	Rhinocerotidae	
Range/Habitat/Ecology	Distributed throughout South Africa in woodlands and grasslands.			
Conservation status	IUCN: Near Threatened CITES: II	Regional: Not listed USFWS: Not listed	Wild Trend:	Increasing
Cooperative Programs	Yellow SSP			
Current Holding	1.0	Target Number	1.1	
Availability	Very limited availability, unless managing multiple males.			
Animal Well-being	This species can tolerate temperatures and remain outside above 50-55F. Ensuring they have the proper sized indoor barn is important for overall well-being. Proper substrate and maintenance of flooring is essential for their overall health.			
Guest Experience	Reliable guest experience, BTS opportunity, mixed-species exhibit appropriate with ample space			
Mission	The White rhino offers us a unique opportunity for guest education. Rhinos are one of the most recognized animals when discussing poaching. Human misuse of species and negative effects is a key point when talking about rhinos.			
Exhibits/Buildings	African Plains/ AP D1, our rhino currently shares exhibits D1 and D3 with 0.2 zebra.			
Recommendations and Rationale	As one of the most iconic African species, rhinos should remain in our animal collection. With our current space, consideration of adding an older female could be potentially beneficial to our individual male. Major exhibit renovations are being considered.			
History at PZG	Reported at Philadelphia Zoo in 1972.			



African Plains/AP D1

Common name	Burchells zebra	Scientific name	Equus quagga burchelli	
Order	Perrisodactyla	Family	Equidae	
Range/Habitat/Ecology	Distributed widely across the African continent in savanna and grasslands the zebra is the most populous equid on earth.			
Conservation status	IUCN: Near Threatened CITES: II	Regional: Not listed USFWS: Not listed	Wild Trend:	Increasing
Cooperative Programs	Yellow SSP			
Current Holding	0.2	Target Number	0.2	
Availability	Available within AZA.			
Animal Well-being	This species is very cold tolerant. Ensuring they have the proper sized indoor barn is important for overall well-being. Proper substrate and maintenance of flooring is essential for their overall health. Opportunities to graze is a desirable component.			
Guest Experience	Reliable guest experience and mixed-species exhibit appropriate.			
Mission	As one of the world’s most iconic species zebra offer a great educational opportunity to connect the importance of proper land management to ensure prey is abundant for the predators that require it.			
Exhibits/Buildings	African Plains/ AP D3, our zebra currently shares exhibits D1 and D3 with 1.0 Southern white rhinoceros.			
Recommendations and Rationale	As an iconic African species, zebra should be maintained at the zoo. Adding an additional female to this pair has been discussed, waiting upon rhino SSP with rhino availability, cautious to add too much to this exhibit at this time. Major exhibit renovations are being considered and would offer oppurtunity to house a herd (1.6) within multispecies exhibit.			
History at PZG	Reported at Philadelphia Zoo in 1886.			



African Plains/AP 1 B

Common name	Giraffe	Scientific name	Giraffa Camelopardalis	
Order	Artiodactyla	Family	Giraffidae	
Range/Habitat/Ecology	Giraffe are found south of the Sahara in Africa. Giraffe inhabit savanna, scrub, open acacia woodlands and subtropical and tropical grasslands with trees and bushes.			
Conservation status	IUCN: Vulnerable CITES:	Regional: Not listed USFWS: Not listed	Wild Trend:	Decreasing
Cooperative Programs	Yellow SSP			
Current Holding	2.2	Target Number	1.3	
Availability	Available within AZA.			
Animal Well-being	Giraffes require proper housing during winter that allows them to stay within under 50 degrees. This species should also have ample exhibit space and opportunities for high foraging and areas to properly exercise. Giraffes are known to display repetitive behavior when kept in smaller spaces. Oppurtunitites for goal oriented enrichment is important. Giraffe, like most hoofed animals have tendencies to show signs of stress during the introduction of new sights and sounds. A desensitizing plan is important in order to help them regulate stress as it occurs.			
Guest Experience	Reliable guest experience and mixed-species exhibit appropriate within a space that can maintain flight distance for each species. Giraffe are the most popular experience in our BTS program. Giraffe could offer higher occupancy feeding opportunities for guests with minimal renovations to current space.			
Mission	As one of the world's most iconic species giraffe offer a great educational opportunity to connect the importance of proper land management to ensure prey is abundant for predators that require it. Giraffe also offer a great opportunity to educate our guests about the importance of animal sensory systems and how they are used.			
Exhibits/Buildings	African Plains/ AP1 B			
Recommendations and Rationale	Giraffe are a recommended species to continue holding. Our current male does not mix well with new calves, breeding him is not ideal in our current set up. Major exhibit renovations are being considered and would allow for a larger herd, potential bachelor herd as well as multi species exhibit.			
History at PZG	Reported at Philadelphia zoo in 1874.			



African Plains/AP 1 A

Common name	Hippopotamus	Scientific name	Hippopotamus amphibius	
Order	Artiodactyla	Family	Hippopotamidae	
Range/Habitat/Ecology	Distributed across sub-Saharan Africa, in grasslands, near lakes and rivers.			
Conservation status	IUCN: Vulnerable CITES: II	Regional: Not listed USFWS: Not listed	Wild Trend:	Stable
Cooperative Programs	Yellow SSP			
Current Holding	0.2	Target Number	0.2	
Availability	Hippos are available within the SSP, specifically if willing to manage breeding groups.			
Animal Well-being	Hippos require proper housing during winter that allows them to stay within under 50 degrees as well as have appropriate sized heated indoor pool. This species should also have ample exhibit space and opportunities for grazing.			
Guest Experience	Reliable guest experience and mixed-species exhibit appropriate within a space that can maintain flight distances and protection for more vulnerable species.			
Mission	As one of the most iconic species hippos offer a great educational opportunity to connect the importance of proper land management as well as water quality messaging. Hippos offer a great opportunity for underwater viewing for our guests as well as BTS opportunity.			
Exhibits/Buildings	African Plains/ AP1 A			
Recommendations and Rationale	As one of the world's most iconic species hippos should be a species that we continue to manage. The SSP is encouraging consideration of breeding groups, approx. 6-8 animals within a group. Major exhibit renovations would need to be considered to allow not only outdoor space but also indoor facility improvement due to climate.			
History at PZG	Reported at Philadelphia zoo in 1887.			



African Plains AP2/1+2



African Plains/AP 2, 1+2

Common name	Mhorr gazelle	Scientific name	Nanger dama mhor	
Order	Artiodactyla	Family	Bovidae	
Range/Habitat/Ecology	Although the dama mhor gazelle normally inhabits grasslands and semi-desert, today they are in marginal areas on stony plains and plateaus, and mountain foothills in Chad, Mali and Niger.			
Conservation status	IUCN: Critically Endangered CITES: I	Regional: Not listed USFWS: Not listed	Wild Trend:	Decreasing
Cooperative Programs	Yellow SSP			
Current Holding	0.1	Target Number	0	
Availability	This individual is the last Dama mhor gazelle within the SSP population. SSP managed this species with the goal of extinction from AZA facilities due to lack of ability to maintain populations for 100+ years as well as projected future of wild populations.			
Animal Well-being	Dama mhor gazelle requires proper housing during winter that allows them to stay within over 50 degrees. This species should also have ample exhibit space and opportunities for grazing.			
Guest Experience	As a single animal, this individual offers little guest experience to the average guest.			
Mission	This individual could offer a great learning opportunity to our guests on several topics. The SSP and decisions that have long term effect on species. As the last of her species, this individual also offers a great conversation around human encroachment and negative impact on land use.			
Exhibits/Buildings	African Plains/ AP2/1+2, this animal shares an exhibit with 1.2 Red river hog, 1.1 and 1.1 Saddle billed stork.			
Recommendations and Rationale	Manage this individual until deceased.			
History at PZG	Reported at Philadelphia zoo in 1995.			



African Plains/AP 2, 1+2

Common name	Grants gazelle	Scientific name	Nanger granti	
Order	Artiodactyla	Family	Bovidae	
Range/Habitat/Ecology	Found in eastern African savannas.			
Conservation status	IUCN: Least concern CITES: Not listed	Regional: Not listed USFWS: Not listed	Wild Trend:	Unknown
Cooperative Programs	Studbook only			
Current Holding	0.0	Target Number	1.4	
Availability	Available within AZA.			
Animal Well-being	Relatively winter hardy and heat tolerant with simple care and housing requirements, heated access during very cold temperatures. This species has known to successfully acclimate to cooler temperatures.			
Guest Experience	Reliable guest experience, mixed-species exhibit appropriate.			
Mission	Encourages Joyful discovery			
Exhibits/Buildings				
Recommendations and Rationale	Grants gazelle could fit into the current Phase exhibit well. They are able to live with mixed species and can acclimate to cooler temperatures. Minimal exhibit modifications would need to be implemented prior to adding them into that exhibit. Grants gazelle could easily clear current wall.			
History at PZG	No report.			



African Plains/AP 2, 1+2

Common name	Red river hog	Scientific name	Potamochoerus porcus	
Order	Artiodactyla	Family	Suidae	
Range/Habitat/Ecology	Red river hogs inhabit Central Africa in grasslands and forested areas.			
Conservation status	IUCN: Least Concerned CITES: I	Regional: Not listed USFWS: Not listed	Wild Trend:	Decreasing
Cooperative Programs	Green SSP			
Current Holding	1.2	Target Number	1.4	
Availability	Available within SSP.			
Animal Well-being	Red river hogs require ample opportunity for foraging and rooting. They also require indoor holding below 40 degrees. Substrate and flooring are important due to their sensitive hooves.			
Guest Experience	Red river hogs are a popular animal for our guests. They are reasonably cold hardy and are extremely active during the day. They are mixed species compatible.			
Mission	Encourages joyful discovery			
Exhibits/Buildings	African Plains/ AP2, the animals share an exhibit with 0.1 Mhorr gazelle and 1.1 saddle billed stork			
Recommendations and Rationale	Considering the age of our animals we could either manage this group until a genetically valuable pair becomes available. We could also discuss with SSP potential for castrating our male to allow for possibility of bringing in another male with future intent of breeding a different female. Concern for bringing in new male would be tolerance of our older females.			
History at PZG	Reported at Philadelphia zoo in 1907.			



Water is Life

Carnivore Kingdom

CK D,E,D3,B,A,

CK 5,6,7,F1,B1

HB,8



WIL/CK D,E

Common name	Red Panda	Scientific name	Ailurus fulgens fulgens	
Order	Carnivora	Family	Ailuridae	
Range/Habitat/Ecology	Red panda are found in temperate forests in the Himalayas in Asia.			
Conservation status	IUCN: Endangered CITES: I	Regional: Not listed USFWS: Not listed	Wild Trend:	Decreasing
Cooperative Programs	Green SSP			
Current Holding	1.0	Target Number	1.4	
Availability	Availability within AZA.			
Animal Well-being	Red pandas require an abundant “ad lib” amount of bamboo for their diet. They also should have access to cool spaces above 85 degrees.			
Guest Experience	Red pandas are very popular with our guests. They are very cold hardy and have active periods through out the day. They have proven to utilize Zoo360 model very well. Red pandas have strong potential for BTS opportunity.			
Mission	Red pandas are great ambassadors since they are a guest favorite. They offer a good educational opportunity to talk about misuse of land area and timber industry as well as importance of water quality.			
Exhibits/Buildings	Carnivore Kingdom/DE			
Recommendations and Rationale	We will focus on adding individuals in order to utilize the new and larger exhibit spaces they have. We will not be a breeding institution.			
History at PZG	Reported at Philadelphia zoo in 1906.			



WIL/CK B12

Common name	Canadian Lynx	Scientific name	Lynx canadensis canadensis	
Order	Carnivora	Family	Felidae	
Range/Habitat/Ecology	Widely spread throughout dense, boreal forests of North America.			
Conservation status	IUCN: Least Concerned CITES: II	Regional: Not listed USFWS: Not listed	Wild Trend:	Stable
Cooperative Programs	SSP Yellow			
Current Holding	0.1	Target Number	0.0	
Availability	There is availability within AZA.			
Animal Well-being	Canadian lynx are weather tolerant year round. They require elevated resting/exploring areas as well as a diverse diet.			
Guest Experience	While our guests do like lynx, as with all cats activity level is low. This is a small cat with majority of time budget inactive, not an ideal species for our guest experience goals.			
Mission				
Exhibits/Buildings	Carnivore Kingdom/B12			
Recommendations and Rationale	This is not a species recommended to continue. Considering the age of our individual cat suggestion is to manage until end of life and move away from small/medium cat species.			
History at PZG	Reported at Philadelphia zoo in 1877.			



WIL/CK B2

Common name	Fossa	Scientific name	Cryptoprocta ferox	
Order	Carnivora	Family	Viveridae	
Range/Habitat/Ecology	Endemic to Madagascar, fossa is found throughout the island.			
Conservation status	IUCN: Vulnerable CITES: II	Regional: Not listed USFWS: Not listed	Wild Trend:	Stable
Cooperative Programs	SSP Yellow			
Current Holding	1.0	Target Number	1.1	
Availability	There is availability, SSP interested in establishing new breeding pairs.			
Animal Well-being	Fossa are very agile and active animals. They do require heated areas below 50-55 degrees. They also should be given ample opportunity to motor, explore and investigate.			
Guest Experience	The fossa is a guest favorite. He has proven to utilize Zoo360. He has shown that if given ample space he is more active. When space is limited he tends to sleep/rest majority of day on exhibit.			
Mission	Encourages joyful discovery			
Exhibits/Buildings	Carnivore Kingdom/B2			
Recommendations and Rationale	Fossa is a new species for the Philadelphia Zoo. It is recommended that if we are interested in pursuing a breeding pair consideration should be made to add a Zoo360 oppurtunity and larger exhibit space. This species has proven to be a guest favorite and could potentially be part of our BTS program.			
History at PZG	Reported at Philadelphia zoo in 2017.			



WIL/CK 5,6,7, F1,B1

Common name	Giant River Otter	Scientific name	Pteronura brasiliensis	
Order	Carnivora	Family	Mustelidae	
Range/Habitat/Ecology	Giant river otter are found in slow moving rivers, lakes and swamps in South America.			
Conservation status	IUCN: Endangered CITES: I	Regional: Not listed USFWS: Not listed	Wild Trend:	
Cooperative Programs	SSP Red			
Current Holding	2.2	Target Number	4.3	
Availability	Availability within AZA.			
Animal Well-being	Giant river otters require robust water filtration systems and monitoring. Animals need access to warm water year round and require more land space than water areas. Giant otters are known to have foot issues so substrate and flooring are important. These animals are matriarchal, highly social and vocal. Managing multiple groups requires experience, attention to detail and secure facilities.			
Guest Experience	Giant river otters are a guest favorite. They have proven to utilize Zoo360, utilize varied exhibit elements and remain active often during the day. They are entertaining to observe and captivate guests for longer periods than other species. Giant otters are in our BTS program.			
Mission	Supports SSP			
Exhibits/Buildings	Carnivore Kingdom/5,6,7F1 + B1			
Recommendations and Rationale	Giant river otters are doing well in 2 groups within the larger exhibit space recently constructed for them. SSP has recommended that we breed 1 of our pair, which would give us not only valuable insight into medical issues for the species but also add to our collection within a space that can easily handle additional animals.			
History at PZG	Reported at Philadelphia zoo in 1996.			



WIL/CK HB8

Common name	White Nosed Coati	Scientific name	Nasua narica molaris	
Order	Carnivora	Family	Procyonidae	
Range/Habitat/Ecology	Grassland and forest of Mexico and northern South America.			
Conservation status	IUCN: Least Concerned CITES: III	Regional: Not listed USFWS: Not listed	Wild Trend:	Decreasing
Cooperative Programs				
Current Holding	1.0	Target Number	0.0	
Availability	There is very limited availability within SSP, availability within pet trade.			
Animal Well-being	Coati require indoor holding when temperatures reach below 55 degrees. They are social animals and should be housed with other conspecifics. Coati are active and exploratory animals and should be offered space and opportunity to explore.			
Guest Experience	Currently our only coatiumundi is not viewable to our guests. He is an older animal and lives most of his time in back holding.			
Mission				
Exhibits/Buildings	Carnivore Kingdom/HB8			
Recommendations and Rationale	Recommended retaining this individual until end of life. Coati could potentially be a great candidate for Zoo360, at this time we do not have the exhibit/holding space to add more animals.			
History at PZG	Reported at Philadelphia zoo in 1883.			



Cheetah

Run

Syard A,B

E, E1



Cheetah Run Syard A

Common name	South African Cheetah	Scientific name	Acinonyx jubatus jubatus	
Order	Carnivora	Family	Felidae	
Range/Habitat/Ecology	The cheetah has a wide distribution throughout much of sub-Saharan Africa.			
Conservation status	IUCN: Vulnerable CITES: I	Regional: Not listed USFWS: Not listed	Wild Trend:	Decreasing
Cooperative Programs	SSP, yellow			
Current Holding	0.2	Target Number	0.2	
Availability	Availability within SSP.			
Animal Well-being	Cheetahs are relatively cold tolerant and require heated access to holding during extremely cold temperatures. Cheetahs, like all cats sleep and patrol the majority of their day. As the fastest land animal, cheetahs should be offered opportunities for long spaces to allow for running.			
Guest Experience	Cheetahs are popular with our guests and offer a variety of educational topics. They could potentially be included in our BTS program given the appropriate guest areas. Cheetahs could also provide an opportunity for animal husbandry training demonstrations.			
Mission	Cheetahs offer a variety of educational opportunities for our guests. Decreasing wild populations due to misuse of land, animal adaptations and SSP management.			
Exhibits/Buildings	Cheetah Run/SyardA			
Recommendations and Rationale	Continuing to hold cheetahs as exhibit only animals. Current discussions for our cheetah collection include a long area for a daily cheetah run as well as additional BTS area. Adding a safely working lure system in current exhibit would allow cheetahs exercise and would also be a great guest opportunity.			
History at PZG	Reported at Philadelphia zoo in 1879.			



Cheetah Run Syard B

Common name	Maned wolf	Scientific name	Chrysocyon brachyurus	
Order	Carnivora	Family	Canidae	
Range/Habitat/Ecology	Forest, Wetlands (inland), Grassland, Shrubland, Savanna of central South America.			
Conservation status	IUCN: Near Threatened CITES: II	Regional: Not listed USFWS: Not listed	Wild Trend:	Unknown
Cooperative Programs	SSP, yellow			
Current Holding	1.1	Target Number	1.1	
Availability	Availability within SSP.			
Animal Well-being	Maned wolves are relatively cold tolerant and require heated access to holding during cold temperatures.			
Guest Experience	Due to the maned wolves crepuscular natural behavior our guests seldom see our wolves. They often spend the majority of the day in their dens resting. Guests do enjoy the brief feeding time when the wolves are active and visible, however that is only about 15 minutes within a day.			
Mission	Supports SSP			
Exhibits/Buildings	Cheetah Run/SyardB			
Recommendations and Rationale	Our current pair is a recommended breeding pair and should remain for the next 1-2 breeding seasons. Due to the inability for our guests to have reliable viewing of these animals, and the dens they utilize during the day; as we plan on looking at major renovation we should consider removing this species from our collection. As the only canid species at the zoo we should discuss an alternate canid species which may suit our needs better, or designing “on exhibit” dens for maned wolves.			
History at PZG	Reported at Philadelphia zoo in 1945.			



Cheetah Run Syard B

Common name	Bush dog	Scientific name	Speothos venaticus	
Order	Carnivora	Family	Canidae	
Range/Habitat/Ecology	Forest, Wetlands (inland), Grassland, Shrubland, Savanna of northern South America.			
Conservation status	IUCN: Near Threatened CITES: II	Regional: Not listed USFWS: Not listed	Wild Trend:	Decreasing
Cooperative Programs				
Current Holding	0.0	Target Number	2.2	
Availability	Availability within SSP.			
Animal Well-being	Bush dogs are relatively cold tolerant and require heated access to holding during cold temperatures.			
Guest Experience	As a species that is diurnal bush dog could improve the guest experience for the exhibit.			
Mission	Encourage joyful discovery			
Exhibits/Buildings	Cheetah Run/SyardB			
Recommendations and Rationale	Bush dogs would be a good canid representation for our collection. They are diurnal and can tolerate cooler temperatures with access to heated areas. The current wolf exhibit would be a good exhibit with minimal modifications.			
History at PZG	No report.			



Cheetah Run Syard E,E1

Common name	Black and white colobus	Scientific name	Colobus guereza	
Order	Primate	Family	Cercopithecidae	
Range/Habitat/Ecology	Black and white colobus has a relatively widespread, central African distribution. They range in wooded habitats, including all types of closed canopy forests, with a particular preference for degraded or secondary forest.			
Conservation status	IUCN: Least Concerned CITES: II	Regional: Not listed USFWS: Not listed	Wild Trend:	Unknown
Cooperative Programs	SSP, yellow			
Current Holding	2.4	Target Number	2.4	
Availability	Availability within SSP.			
Animal Well-being	Colobus, like all primates require heated access during cold temeratures. They are a social species and should be maintained in a family group. Colobus have multi chambered stomachs and special attention should be paid to their diet to ensure diversity.			
Guest Experience	Colobus are a guest favorite; they are currently located in the area of the zoo that has minimal animal presence. They are active during most of the day and provide our guests with an opportunity to see a family species. Colobus have the potential for a guest demonstration.			
Mission	Encourage joyful discovery			
Exhibits/Buildings	Cheetah Run E,E1			
Recommendations and Rationale	Our current family will need to be evaluated regarding the younger male in the group. This group of animals is doing well and is currently in a nonbreeding situation being managed with implants for the females. Maintaining colobus is recommended, discussion around location and individual animals ae in progress.			
History at PZG	Reported at Philadelphia zoo in 1930.			



Cheetah Run Syard E,E1

Common name	Cape Porcupine	Scientific name	Hystrix africaeaustralis	
Order	Rodentia	Family	Hystriidae	
Range/Habitat/Ecology	Cape porcupine can be found in the entirety of southern Africa in all habitats with the exception of swamp and marsh land.			
Conservation status	IUCN: Least Concerned CITES: II	Regional: Not listed USFWS: Not listed	Wild Trend:	Stable
Cooperative Programs	SSP, yellow			
Current Holding	1.0	Target Number	0.0	
Availability	Availability within SSP.			
Animal Well-being	Cape porcupine require areas for digging and exploring. They require indoor holding during temperatures below 55 degrees.			
Guest Experience	Currently the cape porcupine is not very visible for guests.			
Mission				
Exhibits/Buildings	Cheetah Run/SyardE,E1			
Recommendations and Rationale	We are currently in progress of transferring this individual and not pursuing additional Cape Porcupine to our collection.			
History at PZG	Reported at Philadelphia zoo in 1926.			



Bear

Country

BC Yard 1,2,3+

H1,2,3,6,7,8



Bear Country Yard 2,3, H 6,7,8

Common name	Sloth bear	Scientific name	Melursus ursinus	
Order	Carnivora	Family	Ursidae	
Range/Habitat/Ecology	Sloth bears are found in a wide variety of habitats on the Indian subcontinent, from grasslands and thorn scrub to evergreen forest.			
Conservation status	IUCN: Vulnerable CITES: I	Regional: Not listed USFWS: Not listed	Wild Trend:	Decreasing
Cooperative Programs	SSP, yellow			
Current Holding	1.1	Target Number	1.1	
Availability	Limited availability in SSP.			
Animal Well-being	Sloth bears are cold tolerant. They require heated indoor access during winter months. Sloth bears are very intelligent and require opportunity to forage, explore and manipulate objects throughout the day. Opportunities to climb will be utilized by sloth bears.			
Guest Experience	Sloths bear are very popular with our guests, with current management, they are visible/active throughout most of the day. This species has potential for BTS opportunity and is currently part of a keeper demonstration for guests.			
Mission	Sloth bears offer a great message opportunity regarding human animal misuse, pet trade and poaching. Supports SSP			
Exhibits/Buildings	Bear Country yard 2,3 H6,7,8			
Recommendations and Rationale	Sloth bears are one of (2) bear species that we are focusing on for breeding. Our current pair is a recommended breeding pair and we are working diligently on a successful birth. Sloth bear could also be a great species for Zoo360.			
History at PZG	Reported at Philadelphia zoo in 1895.			



Bear Country Yard 2, H 1,2,3

Common name	Andean bear	Scientific name	Tremarctos ornatus	
Order	Carnivora	Family	Ursidae	
Range/Habitat/Ecology	Found throughout the Andes mountain range in South America, found in wide variety of habitats and altitudes.			
Conservation status	IUCN: Vulnerable CITES: I	Regional: Not listed USFWS: Not listed	Wild Trend:	Decreasing
Cooperative Programs	SSP, yellow			
Current Holding	1.0	Target Number	1.1	
Availability	The availability in SSP is limited.			
Animal Well-being	Andean bears are cold tolerant. They require heated indoor access during winter months. Andean bears are nest builders and should have the opportunity for climbing. As like all bears they forage often and should be given opportunity to forage, explore and manipulate objects through out the day.			
Guest Experience	Andean bears are very popular with our guests. This species has potential for BTS opportunity and is currently part of a keeper demonstration for guests.			
Mission	Andean bears offer an educational opportunity for our guests about misuse of land. Support SSP			
Exhibits/Buildings	BC 1,2,3 Yard 1			
Recommendations and Rationale	Our current male is recommended for breeding, and we are currently waiting on import permits for a female from Columbia.			
History at PZG	Reported at Philadelphia zoo in 1955.			



Key Bank

Big Cat Falls

BCF Y 1,2,3,4,5

H1-32, North Trail, South Trail



Common name	African lion	Scientific name	Panthera leo krugeri	
Order	Carnivore	Family	Felidae	
Range/Habitat/Ecology	African lions are found in central and south Africa in forest, grassland, shrub land, savanna and desert.			
Conservation status	IUCN: Vulnerable CITES: II	Regional: Not listed USFWS: Not listed	Wild Trend:	Decreasing
Cooperative Programs	SSP, green			
Current Holding	1.5	Target Number	1.1	
Availability	Available within AZA.			
Animal Well-being	African lions are generally cold tolerant, they should have access to heated indoor areas in inclement and winter weather. Lions, as all cats spend most of their time sleeping, small amounts of time feeding and patrolling. They should be given ample space to meet these needs and a diverse diet is optimal.			
Guest Experience	African lions are very popular with our guests. They utilize Zoo360 and as one of the biggest cats they are a crowd pleaser. BCF is part of our BTS program, our cats have the potential to participate in husbandry training guest demonstrations.			
Mission	African lions offer an educational opportunity for our guests about misuse of land.			
Exhibits/Buildings	BCF			
Recommendations and Rationale	We are currently waiting on permits for exporting 0.2. Our goal is to transfer our younger 0.2 as well and focus on holding 1.1. As an iconic species lions are an important part of our collection and should be maintained long term, additional Zoo360 as well as additional exhibits would benefit overall management and guest experience of our cat collection.			
History at PZG	Reported at Philadelphia zoo in 1875.			



Common name	Amur tiger	Scientific name	Panthera tigris altaica	
Order	Carnivora	Family	Felidae	
Range/Habitat/Ecology	Amur tiger range in northern Asia, in a wide range of habitats, from tropical forests to tall grass jungles, encompassing coniferous woodlands, mangrove swamps and dry thorn forests.			
Conservation status	IUCN: Endangered CITES: I	Regional: Not listed USFWS: Not listed	Wild Trend:	Decreasing
Cooperative Programs	SSP, green			
Current Holding	3.1	Target Number	3.1	
Availability	Available within AZA.			
Animal Well-being	Amur tigers are very cold tolerant, they should have access to heated indoor areas in inclement and winter weather. Tigers, as all cats spend most of their time sleeping, small amounts of time feeding and patrolling. They should be given ample space to meet these needs and a diverse diet is optimal.			
Guest Experience	Amur tigers are very popular with our guests. They utilize Zoo360 and as one of the biggest cats they are a crowd pleaser. BCF is part of our BTS program; our cats have the potential to participate in husbandry training guest demonstrations.			
Mission	Amur tigers offer an educational opportunity for our guests about misuse of land, over the past century tigers have lost their habitat by 90% due to deforestation. Support SSP			
Exhibits/Buildings	BCF			
Recommendations and Rationale	Recommended to maintain our current holding. Our 0.2 are great users of our Zoo360 and our 1.1 are a breeding recommendation through either A.I. or breeding. Our female is aging and we should be looking for potentially a younger female, however we would need to transfer current female out of zoo due to current holding space.			
History at PZG	Reported at Philadelphia zoo in 1874.			



Common name	Amur leopard	Scientific name	Panthera pardus orientalis	
Order	Carnivora	Family	Felidae	
Range/Habitat/Ecology	Amur leopards reside only in one isolated population in the Russian far East, in deeply covered temperate forest.			
Conservation status	IUCN: Critically Endangered CITES: I	Regional: Not listed USFWS: Not listed	Wild Trend:	Decreasing
Cooperative Programs	SSP, yellow			
Current Holding	0.2	Target Number	1.2	
Availability	Their availability in SSP is limited.			
Animal Well-being	Amur leopards are very cold tolerant, they should have access to heated indoor areas in inclement and winter weather. Like all cat species they spend most of their time sleeping, small amounts of time feeding and patrolling. They should be given ample space to meet these needs and a diverse diet is optimal. Leopards should also be give climbing opportunities.			
Guest Experience	Amur leopards are popular with our guests. They utilize Zoo360. BCF is part of our BTS program; our cats have the potential to participate in husbandry training guest demonstrations.			
Mission	Amur leopards offer a unique educational opportunity for our guests; they are one of the most endangered mammal in our collection with only 20-25 individuals in the wild remaining, due about misuse of land, over the past century tigers have lost their habitat by 90% due to deforestation. Support SSP			
Exhibits/Buildings	BCF			
Recommendations and Rationale	Recommended to maintain our current population. Our 0.2 are active users of our Zoo360 and our younger female has a breeding recommendation through A.I. as there is no male available.			
History at PZG	Reported at Philadelphia zoo in 1997.			



Common name	Jaguar	Scientific name	Panthera onca	
Order	Carnivora	Family	Felidae	
Range/Habitat/Ecology	Jaguars are found in central and South America from dense rainforest to seasonally flooded swamp areas, scrubland and savannas, but always near water.			
Conservation status	IUCN: Near Threatened CITES: I	Regional: Not listed USFWS: Not listed	Wild Trend:	Decreasing
Cooperative Programs	SSP, green			
Current Holding	1.1	Target Number	1.1	
Availability	Their availability in SSP is limited.			
Animal Well-being	Jaguars are moderately cold tolerant, they should have access to heated indoor areas in inclement and winter weather. Like all cats jaguars spend most of their time sleeping, small amounts of time feeding and patrolling. They should be given ample space to meet these needs and a diverse diet is optimal. Jaguars should also be given water use opportunities.			
Guest Experience	Jaguars are popular with our guests. They have potential to utilize Zoo360. BCF is part of our BTS program, our cats have the potential to participate in husbandry training guest demonstrations.			
Mission	Support SSP			
Exhibits/Buildings	BCF			
Recommendations and Rationale	Recommended to maintain our current population. Our 1.0 is genetically valuable. We just received a young female to pair him for breeding recommendation. Jaguars are a guest favorite, hoping jaguars will utilize Zoo360 as our new female acclimates and potentially breeds and has offspring.			
History at PZG	Reported at Philadelphia zoo in 1875.			



Common name	Puma	Scientific name	Puma concolor	
Order	Carnivora	Family	Felidae	
Range/Habitat/Ecology	Pumas are found in all of the Americas, they inhabit diverse areas from dense rainforest to seasonally flooded swamp areas, scrubland and savannas, but always near water.			
Conservation status	IUCN: Least Concerned CITES: II	Regional: Not listed USFWS: Not listed	Wild Trend:	Decreasing
Cooperative Programs	SSP, yellow			
Current Holding	1.1	Target Number	1.1	
Availability	They are available within AZA.			
Animal Well-being	Pumas are very cold tolerant, they should have access to heated indoor areas in inclement and winter weather. Like all cats puma spend most of their time sleeping, small amounts of time feeding and patrolling. They should be given ample space to meet these needs and a diverse diet is optimal.			
Guest Experience	Pumas are popular with our guests. They utilize Zoo360. BCF is part of our BTS program, our cats have the potential to participate in husbandry training guest demonstrations.			
Mission	Encourages joyful discovery			
Exhibits/Buildings	BCF			
Recommendations and Rationale	Recommended to maintain our current population. Our current pair is non breeding and reaching 14 years old. Recommended that in the next few years we take advantage of opportunities that may arise regarding adding orphaned pumas to our collection.			
History at PZG	Reported at Philadelphia zoo in 1874.			



Common name	Snow leopard	Scientific name	Uncia uncia	
Order	Carnivora	Family	Felidae	
Range/Habitat/Ecology	Pumas are found in all of the Americas, they inhabit diverse areas from dense rainforest to seasonally flooded swamp areas, scrubland and savannas, but always near water.			
Conservation status	IUCN: Vulnerable CITES: I	Regional: Not listed USFWS: Not listed	Wild Trend:	Decreasing
Cooperative Programs	SSP, yellow			
Current Holding	1.1	Target Number	1.1	
Availability	Their availability in SSP is limited.			
Animal Well-being	Snow leopards are very cold tolerant, they should have access to heated indoor areas in inclement and winter weather. Like all cats, they spend most of their time sleeping, small amounts of time feeding and patrolling. They should be given ample space to meet these needs and a diverse diet is optimal.			
Guest Experience	Snow leopards are popular with our guests. They utilize Zoo360. BCF is part of our BTS program, our cats have the potential to participate in husbandry training guest demonstrations.			
Mission	Snow leopards offer a unique guest education opportunity, as we have veterinarian on staff that participates in in situ conservation efforts as well as serves as SSP veterinarian. Support SSP			
Exhibits/Buildings	BCF			
Recommendations and Rationale	Recommended to maintain our current population. Our current pair is a breeding pair that has successful breeding in 2019.			
History at PZG	Reported at Philadelphia zoo in 1914.			



Common name	Black footed cat	Scientific name	Felis nigripes	
Order	Carnivore	Family	Felidae	
Range/Habitat/Ecology	The black-footed cat inhabits steppe and savannah habitats of Africa, such as the Kalahari and Karoo deserts. They require sparse shrub and tree cover in which to hunt, and burrows or hollowed-out termite mounds in which to spend their day.			
Conservation status	IUCN: Vulnerable CITES: I	Regional: Not listed USFWS: Not listed	Wild Trend:	Decreasing
Cooperative Programs	SSP, yellow			
Current Holding	1.1	Target Number	0.0	
Availability	There is availability in SSP.			
Animal Well-being	Black footed cats require warmer temperatures as well as appropriate hiding areas and cover within an exhibit.			
Guest Experience	Our current black footed cats are currently not visible to our guests; they are located in back of house holding in BCF.			
Mission				
Exhibits/Buildings	BCF			
Recommendations and Rationale	Recommended to retain the older pair of black footed cats until they have deceased.			
History at PZG	Reported at Philadelphia zoo in 2006.			

