



2021 Virtual Midyear Meeting Program
Updates

AZA Antelope, Cattle, Giraffid & Camelid (ACGC) TAG

Chair, Steve Metzler, smetzler@sdzwa.org

ASSOCIATION
OF ZOOS
AQUARIUMS &

Forest/Woodland Subgroup

Vice Chair, Andi Kornak,

amk@clevelandmetroparks.com



Common eland

- 39.84.0 (123) in 18 AZA institutions
- 47.82.11 (140) in 21 non-AZA institutions
- **Yellow SSP - Zoo population - Stable**
- Least Concern – Wild population - Stable
- Challenges that adversely affect program:
 - Losing holders
 - Individuals leaving AZA institutions
- What TAG can do to help program & improve sustainability?
 - Help recruit (intact) bachelor herd holders

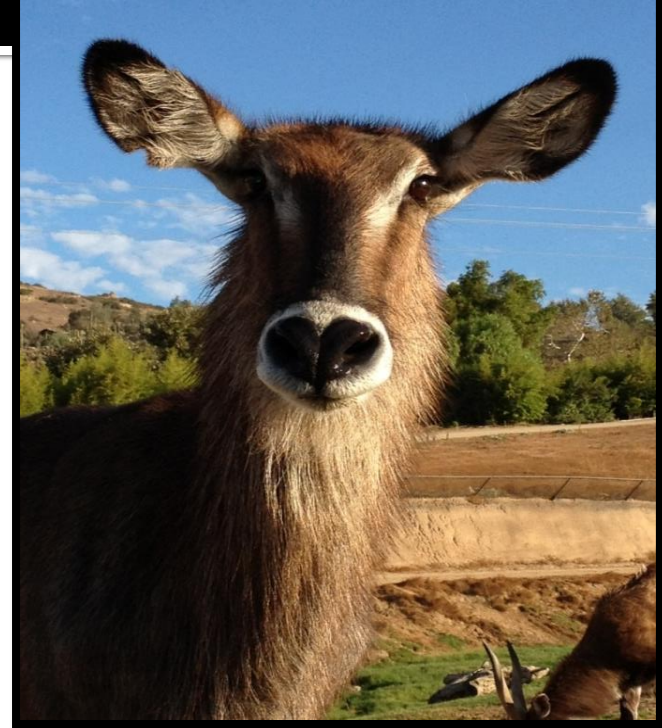


Program Leader

- Lou Keeley
- Lincoln Park Zoo
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- 312-942-2376

Common waterbuck

- 72.107.13 (190) in 12 AZA & 2? non-AZA institutions
- Yellow SSP - zoo population ↑
- Least Concern – wild population ↓
- Challenges that affect this program:
 - Facilities phasing out breeding groups in favor of other species or single sex herds
 - Male management needs: rotations through herds, holding for surplus and holding multiple males
- What can TAG do to help program & improve sustainability?
 - Develop opportunities for multiple males to rotate within herds to enhance genetic diversity
 - Support an increase in known pedigree within current population by collecting and submitting ear notch and blood samples when requested



Program leader

- Vacant

Eastern bongo

- 65.120 (185) in 36 institutions
- Yellow SSP – zoo population ↑
- Critically Endangered – wild population ↑
- Challenges that affect program
 - Increase annual births
 - Need males
- What can TAG do to help program & improve sustainability?
 - Encourage animals not to be sent out of the SSP or check with SSP first.



Program Leaders

- Courtney Janney
- Memphis Zoo
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- 901-333-6544

Greater kudu

- 73.175.1 (249) in 26 AZA & 7 non-AZA institutions
- **Yellow SSP - zoo population ↑**
- Least Concern – wild population stable
- Challenges that affect program:
 - Low % known genetics in population
- What can TAG do to help program & improve sustainability?
 - Promote studies that focus on developing DNA testing for population planning purposes



Program Leaders

- Denny Charlton
- Smithsonian National Zoo
- charltond@si.edu
- 301.278.2069

Impala

- 204 animals at 18 institutions
- Yellow SSP - zoo population steady
- Least Concern— wild population stable

- Challenges that affect this program:
 - Low number of intact males in AZA facilities
 - Decreased number of births over the last two years

- What can the TAG do to help improve the program & sustainability issues?
 - Pursue new holding institutions, especially those who can house a intact bachelor herd



Program Leader

- Matt McHarness
- Disney's Animal Kingdom
- Matthew.G.McHarness@Disney.com
- 407-938-3201

Southern lesser kudu

- 49.45 (94) in 14 institutions
- Yellow SSP - zoo population ↑
- Near Threatened – wild population ↓
- Challenges that affect program:
 - Lack of space - more holders needed for bachelor Kudu
 - New genetics needed
- What can TAG do to help program & improve sustainability?
 - Help get more institutions on board for holding surplus males.
 - Import new founders from Europe

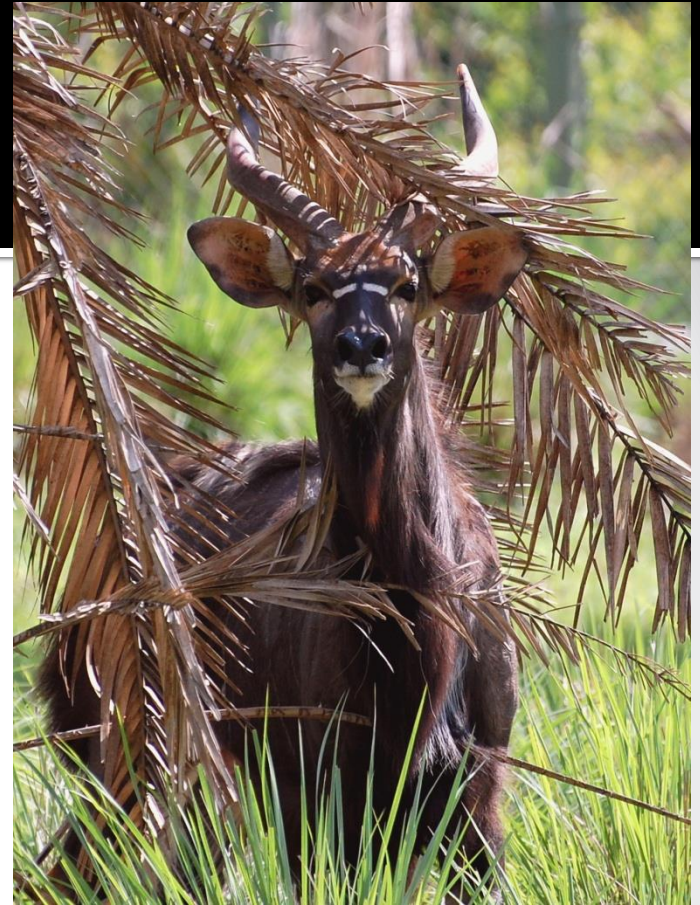


Program Leader

- Lauren Harster
- Saint Louis Zoo
- Harster@stlzoo.org
- 314.646.4651

Lowland nyala

- 29.76 (105) in 18 AZA Institutions
- Yellow SSP - zoo population stable
- IUCN Least Concern – wild population stable
- Challenges that adversely affect program:
 - New institutions needed for both bachelor and breeding groups
 - New genetics needed
- What TAG or Institutions can do to help program & improve sustainability?
 - Assist with removing barriers to importation of animals or semen for artificial insemination



Program Leader

- Steve Metzler
- San Diego Zoo Safari Park
- smetzler@sdzwa
- 760.473.6993

Roan antelope

- 125.115.2 in 10 institutions
- Yellow SSP - zoo population ↑
- Least Concern – wild population ↓
- Challenges that affect this program:
 - Loss of holding institutions
- What can TAG do to help program & improve sustainability?
 - Conduct a PVA
 - Continue to pursue new holding institutions



Program leaders

- Andi Kornak
- Cleveland Metroparks Zoo
- amk@clevelandmetroparks.com
- 216.635.3373

Vice Chair

- Scotty Wade
- White Oak Conservation Center
- scottyw@wocenter.org
- 904-225-3357

Sable antelope

- 34.80.1 (115) animals at 15 institutions
- Yellow SSP - zoo population ↓
- Low Risk-conservation dependent – wild population ↓
- Challenges that affect this program:
 - Lack of space/holders needed
 - New genetics required
 - Development of bachelor herds
- What can the TAG do to help improve the program & sustain ability issues?
 - USDA import station to facilitate imports



Program leader

- Jill Piltz
- Disney's Animal Kingdom
- Jill.M.Piltz@Disney.com
- 321-263-6339
- Gina Ferrie-Disney's PMC Adjunct Adviser

Sitatunga

- 39.73 (112) in 10 AZA institutions and 3 non-AZA institutions
- Yellow Program - zoo population ↑
- Least Concern – wild population ↓
- Challenges that affect this program:
 - Placement of male offspring-more bachelor groups needed
 - Low genetic diversity
- What TAG can do to help program & improve sustainability?
 - Work with US regulators allowing imports from international collections
 - Determine long term viability within the new SSP framework



The Maryland Zoo

Program Leader

- Gil Myers
 - Smithsonian National Zoo
 - myersg@si.edu
 - 202-633-4189

Vice Coordinator

- Stacie Weatherly
 - North Carolina Zoo
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 - 336-879-7664

Nile lechwe

- 45.55 (100) in 7 Institutions
- Yellow SSP - zoo population ↑
- IUCN Endangered– wild population decreasing
- Looking at bringing on new facilities!

- Challenges that adversely affect program:
 - New institutions needed for bachelor groups OR breeding herds
 - New genetics needed

- What TAG or Institutions can do to help program & improve sustainability?
 - Promote species for mixed-species exhibits
 - Elevate the visibility of this species over species with lower conservation priority
 - Institutions should work with SSP to ensure breeding recommendations are carried out



Program leader:

- Mike Murray
- Lincoln Park Zoo
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- 312.742.2374

Wildebeest

- 71.117.26 (214) in 20 AZA & 3 non-AZA institutions
- Yellow SSP - zoo population ↑
- Least Concern – some isolated populations are declining
- Challenges that affect program:
 - Older females – not breeding or their calf mortality is increasing
- What can TAG do to help program & improve sustainability?
 - Continue to support genetic testing



Program Leader

- Kristen Wolfe
- Disney's Animal Kingdom
- Kristen.wolfe@disney.com
- 407.938.2377

Small Antelope Subgroup

Vice Chair, Matt James, matt.james@dallaszoo.com



Blue duiker

Philantomba monticola

- 27.19 (46) individuals at 17 institutions as of March 2021
- **Red** Program
- Captive population slightly increasing with a target population of 75 individuals
- No data on the wild population (Africa), but they are subject to the bush meat trade
- Need institutions who are willing to house blue duikers (single males) and participate in breeding (i.e. You).
- Blue duikers are super adorable, cute, and would make a great addition to your collection plan. They can even be exhibited with other animals. Who would not love a blue duiker calf that is the size of a kitten to show off to the public?



Program Leader

- Sarah Ksiazek
- Dallas Zoo
- Sarah.Ksiazek@dallaszoo.com
- 469.554.7235

Klipspringer

- 13.15 (28) in 9 AZA institutions
- 5.6 (11) in 4 non-AZA institutions
- **Red population- Zoo population increasing.**
- Studbook published June 2020.
- Changes since 1/1/20.
 - 1.2 births in 2020.
 - 2 new institutions on board for 2021.
 - 1 new institutions potentially for 2022 and 2023.
- Challenges that adversely affect program:
 - Low birth rates.
 - Additional spaces needed, especially for males and non-breeding pairs.



- SSP Coordinator
 - Cassandra Kutilek
 - Lincoln Park Zoo
 - Ckutilek@lpzoo.org
- Population Biologist
 - Rachel Bladow
 - PMC
 - Rbladow@lpzoo.org

Red-flanked duiker

- 14.19 (33) in 12 institutions
 - Two new holders coming online
- Red Program - zoo population stable
 - B&T Plan in June 2020
- Least Concern – wild population ↓
- Challenges that affect program:
 - Lack of new institutional holders to help facilitate breeding
 - Perceived exhibition challenges
 - Long-term: Lack of new genetics
- What can TAG do to help program & improve sustainability?
 - Identify new genes for the population (non-AZA or imports).
 - Assist with locating new holding facilities to help program grow
 - Mini husbandry manual currently in the works



Program Leader

- JT Svoke
- Zoo Miami
- Joseph.svoke@miamidade.gov
- 305.251.0400 x 5084897

Steenbok

- 5.10 (15) in 4 AZA Institutions
- Monitored Species:
Downgraded from Candidate Program due to low AZA interest
- IUCN Least Concern – wild population stable
- Challenges that adversely affect program:
 - Small population size
 - Lack of new institutional interest
 - Fractious nature of species.
Recommending institutions hand rear when possible



No longer a program, no program leader

- **For questions please contact ACGC TAG Leadership**

Yellow-backed duiker

- 38.40 (78) in 32 ZIMS institutions
 - Internationally
- Yellow SSP - zoo population, stable
- Near Threatened
 - Wild population declining
- Challenges that adversely affect program:
 - Recent reduction in holding institutions
 - Genetics
- What TAG can do to help program & improve sustainability?
 - Encourage additional holders
 - Continue exporting surplus genetics to EAZA to establish a second region



Matt James – SSP

- Dallas Zoo
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- 469.554.7200

Jessica Biggins – International Studbook

- Milwaukee County Zoo
- Jessica.Biggins@milwaukeecountywi.gov

Bontebok

- 28.36 (64) in 18 institutions
- Yellow SSP - zoo population ↑
- Vulnerable-wild population stable
- Challenges that adversely affect program:
 - Large number of animals on a private ranch excluded due to unknown genetics
 - New genetics needed
 - Many of the recommendations cannot be completed due to lack of funding
- What TAG can do to help program & improve sustainability?
 - USDA import station to facilitate imports
 - Encourage all facilities holding females to breed or hold males instead

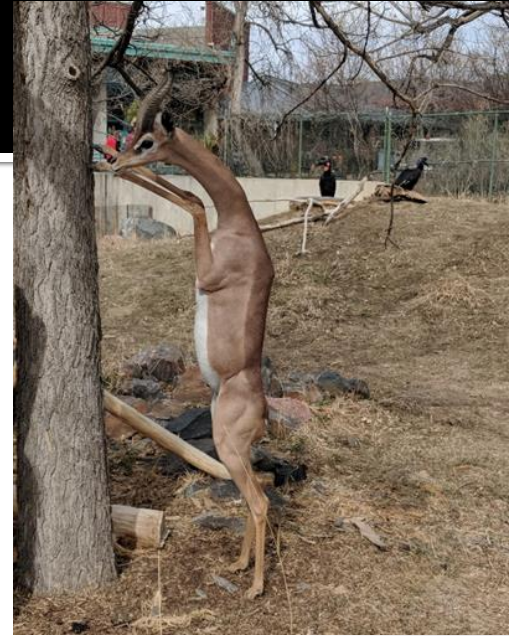


Program leader

- Lissa McCaffree
- San Diego Zoo Safari Park
- lmccaffree@sdzwa.org
- 760.492.4486

Southern Gerenuk

- 22.26 (48) at 10 institutions
- Red SSP - zoo population, declining
- Near Threatened – wild population, decreasing
- Challenges that adversely affect program:
 - Need more holders
 - Genetic diversity
- What TAG can do to help program & improve sustainability?
 - Help with importation of individuals



Program leader

- Christina Seely
- Denver Zoo
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Vice Coordinator

- Manda Butler
- Cameron Park Zoo
- Mandab@ci.ewaco.tx.us
- 254-750-8435

Aridland Antelope Subgroup

Vice Chair, Adam Eyres, adame@fossilrim.org



Addax

- 54.127 (181) in 21 AZA facilities
 - 25 births in 2020 (18 at one facility)
- Yellow SSP - zoo population ~stable following decline in 2019
- Critically Endangered – wild population declining as of last assessment (2016)
- Challenges that affect program:
 - limited gene diversity
 - limited intact bull holding
- What can TAG do to help the program & improve viability?
 - encourage facilities to develop management plans for this species that include breeding only every 2-3 years (to reduce exports)
 - encourage facilities to designate responsive IRs
 - support field conservation of this species through Sahara Conservation Fund

(www.saharaconservation.org)



Program Leader

- Jamie Ivy
- San Diego Zoo Wildlife Alliance
- jivy@sdzwa.org

Addra gazelle

- 44.81.0 (122) in 18 AZA institutions
- Yellow SSP - zoo population, stable
- Critically endangered
- Challenges that adversely affect program:
 - Lack of space, institutional holders
 - Pedigree assumptions in studbook
- What TAG can do to help program & improve sustainability?
 - Encourage institutions to work with this critically endangered high priority species.
 - Support partners working with in-situ conservation.



Program Leader

- Charlie Tucker
- San Diego Zoo Safari Park
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- 760-703-1301

Arabian oryx

- 26.58 (84) in 7 AZA & 1 non-AZA
- Yellow SSP - zoo population ↓
- Vulnerable – wild population stable
- Challenges that affect this program:
 - Lack of space/holders limits population <100 animals, male holdings are limited (do not house well in bachelor groups)
 - **Recent loss of male holding space due to construction & other factors**
- What can AZA Zoos do to help program & improve sustainability?
 - Need more holders!!! Looking for holders of small to large groups, display-only animals also available

This is a fun, charismatic species with a great conservation story!



Program leader

- Michelle Hatwood
- Audubon Species Survival Center
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Cuvier's gazelle

- 1.1 in AZA Population
- Red SSP - zoo population ↓
- Vulnerable – wild population ↓
- Challenges that have adversely affected program:
 - Lack of space
 - ♀/♀ aggression has been noted in some collections

Phase Out Species



Fringe-eared oryx

- 10.35 (45) animals in 4 institutions
- Red SSP - zoo population ↑
- Vulnerable – wild population ↓
- Challenges that affect this program:
 - Lack of space – more holders needed
 - New genetics required
 - Need to increase the population size
 - Lack of funding to move animals
- What can the TAG do to help the program and improve sustainability?
 - Continue to provide guidance to this program as a non SSP

Program leader

- Lissa McCaffree
- San Diego Zoo Safari Park
- lmccaffree@sdzwa.org
- (760) 492-4486



Gemsbok

- 28.62.1 (91) in 10 institutions
- Yellow SSP - zoo population ↓
- Least Concern – wild population stable
- Challenges that affect this program:
 - Lack of space - more holders needed
 - Lack of funding to move animals
 - Need for rotating breeding males at each institution
- What can the TAG do to help the program and improve sustainability?
 - Facilitate import (poss. White Sands) to increase genetic diversity



Program Leader

- Lissa McCaffree
- San Diego Zoo Safari Park
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Grant's gazelle

- 12.26 (38) in 6 institutions
- Red SSP
- Least Concern – wild population
- Challenges that adversely affect program:
 - Lack of available animals
 - Lack of genetic diversity
 - High 1st year mortality
- What TAG can do to help program & improve sustainability?
 - Promote larger mixed species exhibits that help multiple programs
 - Encourage large herds and hand rearing when possible



Program Leader

- Allison Malkowski
- Dakota Zoo
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- 701.223.7543

Peninsular Pronghorn

- 19.22 (41) in 7 institutions
- Red SSP
- Endangered – wild population ↑
- Challenges that adversely affect program:
 - Small captive population in need of imports—Listing needed with Trilateral Committee to simplify permits.
 - Animal moves important for breeding delayed due to Covid 19 pandemic
 - Can be susceptible to Epizootic Hemorrhagic Disease (EHD)
- What TAG can do to help program & improve sustainability?
 - Support for IUCN species Action Plan Workshop (virtual in 2021)
 - Support Peninsular Pronghorn Recovery Project in Baja Ca Sur
 - New holders/breeders needed in dry climate zones



Program Leader

- Melodi Tayles
- San Diego Zoo Wildlife Alliance
- mtayles@sdzwa.org

Scimitar-horned oryx

- Globally
 - 822.1198.51 (2071) animals in 165 of institutions
 - AZA
 - 73.149.3 (225) animals in 17 institutions
 - Births:26.16 (42)
 - Deaths 6.4 (10)
 - 5 transfers (1.4)
 - EAZA
 - 127.200.0 (327) animals in 50 institutions
- Yellow SSP - zoo population
 - Recommended 98 females to breed and 18 SSP transfers.
 - Recommended 30 transfers out of AZA to private sector. (19.11.0)
 - If you need to place animals out of SSP, please contact coordinator, regarding those transfers.
- IUCN: Extinct in the wild
 - Chad re-introduction continues to be successful. Oryx are re-established, reproducing and thriving. To become involved contact John Watkins at Sahara Conservation Fund.
- Challenges that adversely affect program:
 - Maturing males are difficult to manage in a group
 - Valuable males being castrated or moved out of SSP/EEP managed programs
- What TAG or Institutions can do to help program & improve sustainability?
 - Need holders willing to hold bachelor groups or single males
 - Participate in the Collection and Shipment of Reproductive tracts. Contact Budhan Pukazhenth, Smithsonian Conservation Biology Institute within 24 hours of death of animal. Protocol in Breeding & Transfer Plan document.



Program Leaders

- RoxAnna Breitigan- SSP
 - The Living Desert Zoo & Gardens
 - rbreitigan@livingdesert.org
 - 760-346-4898
- Tania Gilbert- International Studbook
 - Marwell Wildlife
 - taniag@marwell.org.uk
 - +44 (0) 1962 777934

Soemmerring's gazelle

- 14.31.1(46) in 5 AZA institutions & 1 non-AZA
- Red SSP - zoo population ↑
- Vulnerable – wild population ↓
- **Challenges that affect program:**
 - Lack of space - more holders needed, specifically for bachelor groups
 - International shipments with current holders
 - High infant mortality
- **What can TAG do to help program & improve sustainability?**
 - Support genetic studies to improve breeding success.
 - Help institutions create birth and neonatal plans to decrease infant mortality rates.
 - Encourage institutions to add this species to their collection.



Program Leader

- Nicole Becker
- Saint Louis Zoo
- Becker@stlzoo.org
- 314-646-4667

Speke's gazelle

- 30.45 (75) in 10 AZA institutions
- Yellow SSP - zoo population ↑
- Endangered – wild population ↓
- Challenges that affect program:
 - Lack of space - more holders needed, especially single species for breeding
 - New genetics needed
- What can TAG do to help program & improve sustainability?
 - Develop plan so Speke's gazelles could be imported

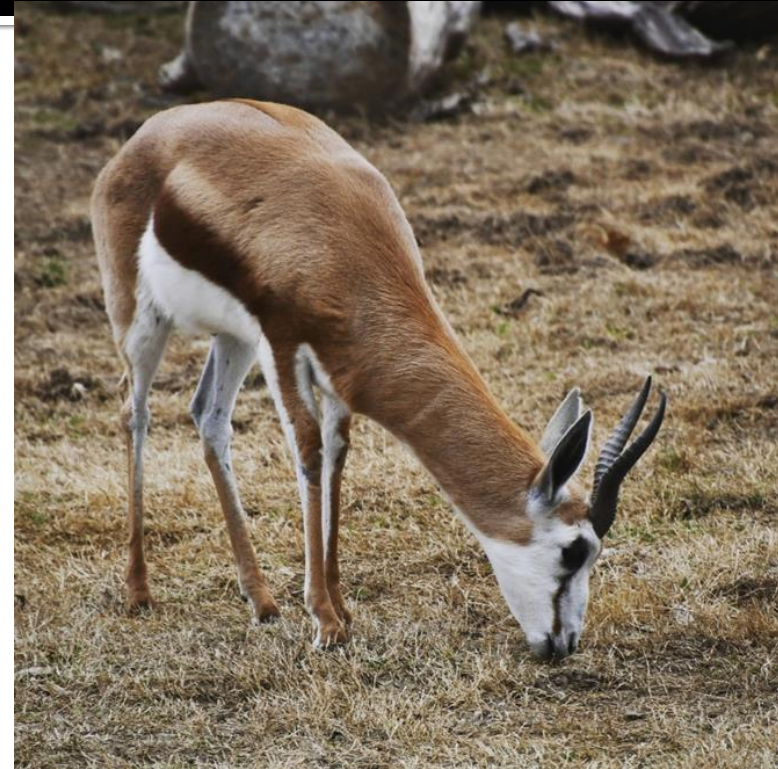


Program Leader

- Christy Poelker
- Saint Louis Zoo
- Poelker@stlzoo.org
- 314.646.4836

South African Springbok

- 36.54 (90) in 11 AZA (+1 non-AZA) institutions
- Yellow SSP - zoo population ↓
- Least Concern – wild population ↓
- Challenges that affect this program:
 - Loss of holding institutions
 - Males need to be removed from breeding herds young
- What can TAG do to help program & improve sustainability?
 - Encourage bachelor herds
 - Continue to pursue new holding institutions



Doug Snyder, Tulsa Zoo

Program leader

- Jessi Vigneault
- Dallas Zoo
- Jessi.Vigneault@dallaszoo.com

Slender-horned gazelle

- 60.60 (120) in 9 AZA institutions & 2 non-AZA
- Yellow SSP - zoo population ↓
- Endangered – wild population ↓
- Challenges that affect program:
 - Lack of space - more holders needed
 - Extremely small genetic foundation – import needed
- What can TAG do to help program & improve sustainability?
 - Develop import station so Slender-horned gazelles could potentially be exchanged with, or imported from Tunisia
 - Encourage support of field conservation of this species through Sahara Conservation Fund



Program Leader

- Brigid Randle
- brigid.randle@gmail.com

Thomson's gazelle

- 69.140 (209) in 20 institutions
- Yellow SSP - zoo population stable
- Near threatened – wild population
↓
- Challenges that affect program:
 - Males need to be removed from breeding herds before 1 year of age.
- What can TAG do to help program & improve sustainability?
 - Encourage institutions to rotate breeding males.
 - Encourage bachelor groups.



Program Leader

- Matt Gelvin
- San Diego Zoo Safari Park
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- 760-622-5026

Giraffid Subgroup

Vice Chair, Mike Murray, mmurray@lpzoo.org



📷 Audubon Species Survival Center

Giraffe SSP Program Leaders

Sheri Horiszny – SSP Coordinator

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Erin Grimm – Studbook Keeper

- The Maryland Zoo
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Andrea Putnam, PhD – Population Advisor

- San Diego Zoo Global
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Adam Felts – Masai Vice-Coordinator

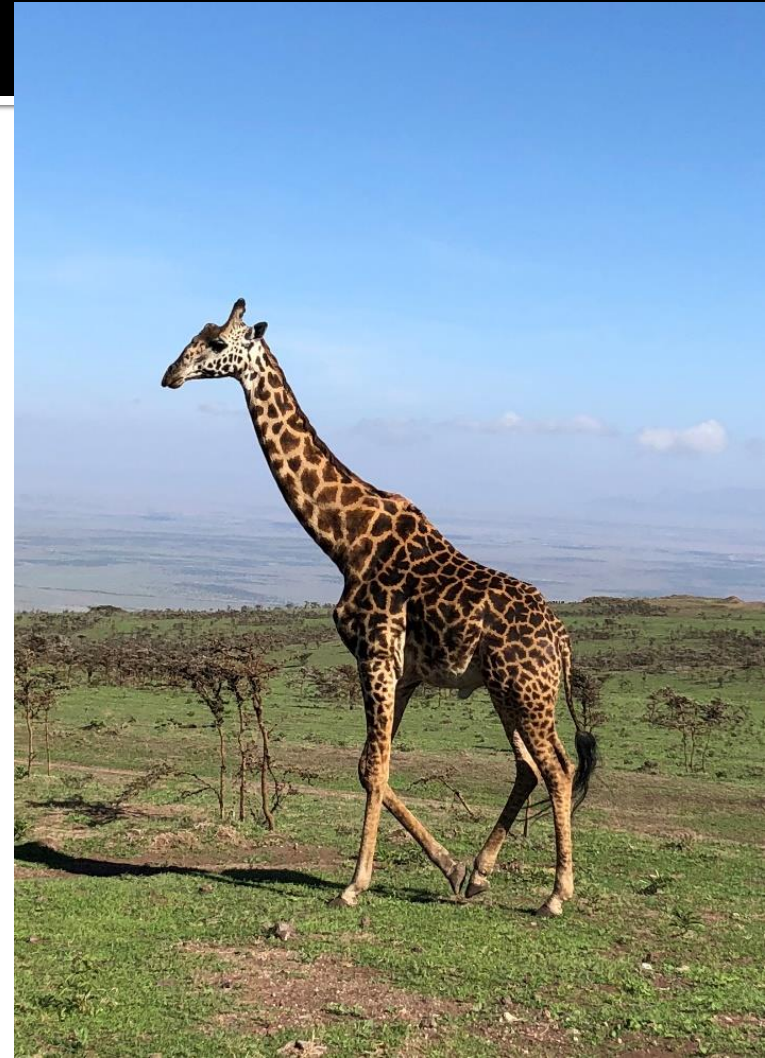
- Columbus Zoo
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Matt James – Generic Vice-Coordinator

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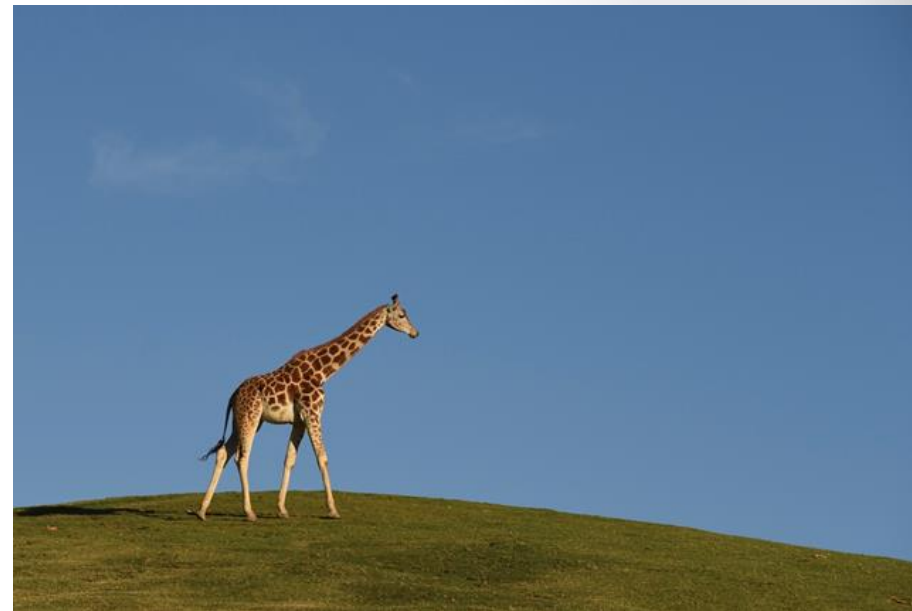
Masai giraffe

- 53.78 (131) in 35 institutions
- Yellow SSP – zoo population ↑
- Endangered – wild population ↓
- Challenges that affect this program:
 - Population remains below RCP target of 150
 - Limited holding capacity for genetically over-represented males
 - Some institutional disposition policies are preventing genetically over-represented animals from being moved out of the SSP, and therefore valuable breeding space is not available



Generic giraffe

- 177.262 (439) in 82 institutions
- Green SSP – zoo population ↑
- Endangered – wild population ↓
- Challenges that affect this program
 - Population remains above RCP target of 400
 - Limited holding capacity for genetically over-represented males
 - Some institutional disposition policies are preventing genetically over-represented animals from being moved out of the SSP, and therefore valuable breeding space is not available



Okapi

89 (49.40) okapi in 29 institutions

- Yellow SSP - zoo population, ↑
- Endangered – wild population
- Challenges that adversely affect program:
 - Increasing health issues impacting longevity – reduced overall production
- What TAG can do to help program & improve sustainability?
 - Encourage institutions to hold single male and non-breeding animals
 - Support the Okapi Conservation Project www.okapiconservation.org



Program Leader

- Steve Shurter-SSP
- White Oak Conservation
- sshurter@white-oak.org
- 904 225 3386

- Sander Hofman, Int. Studbook Keeper
- Zoo Antwerp
- sander.hofman@kmda.org

Wild Cattle & Camelid Subgroup

Vice Chair, Dan Beetem, dbeetem@thewilds.org



Anoa

- 5.7 (12) in 7 AZA institutions
- 169 in 4 private institutions
- Yellow SSP - AZA population ↓ (overall, pop in NA ↑)
- Endangered – wild population ↓
- Challenges that affect program:
 - Lack of space - more holders needed
- What can TAG do to help program & improve sustainability?
 - Encourage AZA institutions to commit to conserving anoa and other wild cattle
- Good News!
 - Recently, there have been a few institutions that have reached out with interest in adding anoa to their collection
 - Partnering with C2S2 on various species conservation and support needs



Program Leader

- Telena Welsch
- Point Defiance Zoo and Aquarium
- Telena.Welsch@pdza.org

American Bison

- 13.22 (35) in 3 institutions are known to be “pure”
- 1 institution currently in a partnership, another one should be in the near future
- 46 other institutions that hold bison, most unknown, some confirmed cattle gene
- Near Threatened
- Challenges that affect this program:
 - Cattle gene in population
- What can TAG do to help program & improve sustainability?
 - ID and get consensus on a genetic testing protocol
 - Have zoos test their bison for cattle gene



Program leader

- Mollye Nardi
- Great Plains Zoo
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- 605-367-8313 ext. 130

African Savannah Buffalo

- 33.47.0 (80) in 6 institutions
- Monitored Species
 - Downgraded from Yellow SSP
- Studbook Keeper
 - Jordan Schimming
 - Denver Zoo
 - jschimming@denverzoo.org
 - 720-337-1614



Banteng

- 10.24 (34) in 5 AZA Institutions
- Red SSP - zoo population ↑
- GSMP (NA, Europe, and Indonesia)
- IUCN Endangered— wild population declining
- Challenges that adversely affect program:
 - New institutions needed
 - GSMP needs North America to increase interest and work with species
- What TAG or Institutions can do to help program & improve sustainability?
 - Encourage institutions to work with this species



Program Leader

- Steve Metzler
 - San Diego Zoo Safari Park
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Gaur

- Phase Out
 - Downgraded from Candidate Program
 - Zoo population continues to decline
 - Animals at 3 U.S. institutions



Camelids

- **Guanaco**
 - No program recommended
 - Downgraded from Candidate Program

- **Bactrian Camel**
 - No program recommended
 - Downgraded from Candidate Program





2021 Virtual Midyear Meeting Program Updates

AZA Caprinae TAG

Chair, Gil Myers, MyersG@si.edu

**ASSOCIATION
OF ZOOS &
AQUARIUMS**

Chinese goral

- 9.16 (25) in 9 AZA institutions
- Red Program - zoo population ↓
- Vulnerable – wild population ↓
- Challenges that adversely affect program:
 - Declining breeding results
 - Demographics
 - New genetics needed
- What TAG can do to help program & improve sustainability?
 - Determine long term viability within the new SSP framework
 - Promote caprids through in-situ conservation awareness



Program Leader

- Gil Myers
- National Zoological Park
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- 202.633.3216

Desert bighorn sheep

- 28.41 (69) in 6 AZA & 2 non-AZA holders
- Yellow SSP - zoo population ↑
- Wild population stable
- Challenges that adversely affect program:
 - Lack of holders and space
- What TAG can do to help program & improve sustainability?
 - Consider replacing *Ovis canadensis canadensis* with *O.c.nelson*
 - Determine long term viability within the new SSP framework



Program leader

- Vacant
- Contact TAG Chair Gil Myers
- myersg@si.edu
- 202-633-4189

Kordofan aoudad

- 35 (24.28) in 6 AZA institutions
- **Phase out**
- **IUCN-Vulnerable**
- Challenges that adversely affected program:
 - Very poor genetics
 - Declining breeding success
- Recent study potentially shows little genetic difference between subspecies
- What TAG and AZA can do to help subspecies?
 - Promote caprids through in-situ conservation awareness
 - Determine long term viability within the new SSP framework



Program Leader

- Molly Shea
- Fossil Rim Wildlife Center
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Nubian ibex

- 10.8 in 3 AZA institutions
- 16.15 in 5 non-AZA institutions
- Red SSP - zoo population ↓
- Vulnerable – wild population ↓
- Challenges that affect this program:
 - Lack of space/holders needed
 - New genetics needed
- What can TAG do to help program & improve sustainability?
 - Determine long term viability within the new SSP framework
 - Promote caprids through in-situ conservation awareness



Program leader (interim)

- Ashley Arimborgo
- Cheyenne Mountain Zoo
- aarimborgo@cmzoo.org
- 719.424.7818

Sichuan takin

- 65.76.0 (141) in 20 AZA institutions & 26.27.4 (57) in 10 non-AZA institutions
- Yellow SSP - zoo population ↑
- Vulnerable – wild population ↓
- Challenges that affect program:
 - Lack of space - more holders needed
 - High unknownness in population
- What can TAG do to help program & improve sustainability?
 - Work with SSP to investigate road blocks to exportation to Canada
 - Work with SSP to understand forthcoming reimagined SSP category/changes
 - Determine long term viability within the new SSP framework



Program Leader

- Dave Bernier
- Lincoln Park Zoo
- dbernier@lpzoo.org
- 312-742-0539

Tajik markhor

- 46.76.0 (122) in 9 AZA and 4 non-AZA facilities
- Yellow SSP - zoo population, stable
- Near threatened – wild population, stable
- Challenges that adversely affect program:
 - Lack of space
 - Compliance with SSP recommendations
- What TAG can do to help program & improve sustainability?
 - Encourage institutional cooperation
 - Support for conservation projects in home range countries
 - Determine long term viability within the new SSP framework



Program Leader

- Seth Groesbeck
- Rosamond Gifford Zoo
- sethgroesbeck@ongov.net
- 315.435.8511 ext 121

Armenian Mouflan

- 6.16.0 (22) 1 AZA and 1 non-AZA holders
- TAG monitor
- **Vulnerable – wild population ↓**
- Challenges that adversely affect program:
 - New genetics needed
 - Institutional support
- What TAG and AZA can do to help species?
 - Promote caprids through in-situ conservation awareness



Program Leader:

- Seth Groesbeck
- Rosamond Gifford Zoo
- sethgroesbeck@ongov.net
- 315-435-8511 Ext. 8502

Transcaspiian Urial

- 14.33 (47) in 5 AZA institutions
- **Red SSP**, - Zoo Population Stable to meet current AZA needs
- IUCN Vulnerable– wild population decreasing
- Challenges that adversely affect program:
 - More holders needed to grow population
 - Poor genetic health
- What TAG or Institutions can do to help program & improve sustainability?
 - Determine long term viability within the new SSP framework
 - Promote caprids through in-situ conservation awareness



Program Leader

- Jon Rolfs
- San Diego Zoo Safari Park
- jrolfs@sdzwa.org
- 321-439-5484

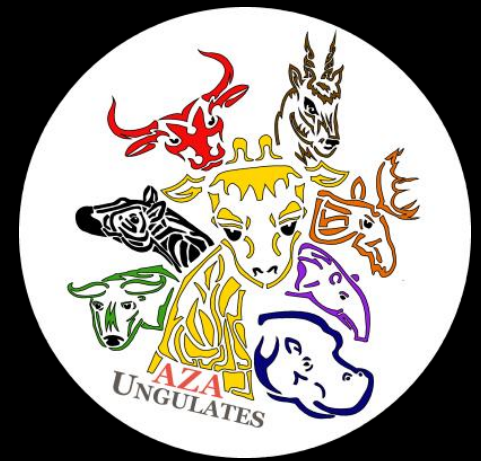
Rocky Mountain goat

- 10.22 (32) in 7 AZA institutions
- New Candidate Program started in 2020 - zoo population ↑
 - 16 wild kids relocated into zoos in 2018/19 as part of the larger translocation project of goats from the Olympic Mountains to the Cascades
- Least Concern – wild population stable
- Current population being tracked in ZIMS for Studbooks—migrated October 2020
- 1st planning session to review population data TBD
- Determine long term viability within the new SSP framework



Program Leader

- Peter Grimm
- Oregon Zoo
- Peter.grimm@oregonzoo.org
- 503-220-5766



2021 Virtual Midyear Meeting Program Updates

AZA Cervid/Deer TAG

Chair, Michelle Hatwood,

mhatwood@auduboninstitute.org

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Barasingha

Rucervus duvaucelii

- 24.31 (55) @ 5 AZA & 1 non-AZA
- Red SSP - zoo population ↓
- Vulnerable – wild population ↓
- Challenges that affect program:
 - CWD restrictions between states
 - Poor genetics
- What can TAG do to help program & improve sustainability?
 - Eld's deer is current priority over barasingha, but keep managing this species at current population size.
Or, get both species!



Program leader

- Matt Gelvin
- San Diego Zoo Safari Park
- mgelvin@sdzwa.org
- 760-622-5026

Southern (Chilean) Pudu

Pudu puda

- 13.20 (33) in 13 institutions
- Red SSP -zoo population↓
- CITES I, IUCN Vulnerable –wild population↓
- Challenges that adversely affect program:
 - Infant mortality is high- study is being conducted
 - Founders needed- SSP seeking support for *in situ* support and funding for future import-contact Deer TAG Chair if interested
mhatwood@auduboninstitute.org
- What TAG can do to help program & improve sustainability?
 - Develop collaborative *in situ project* in Chile
 - Holders to send any handrearing info to SSP coordinator for future guidelines



- Program Leader
 - Craig Gibbs
 - Queens Zoo
 - cgibbs@wcs.org
 - 718-271-3042

Eld's deer

Rucervus eldii

- 22.41 (63) in 4 institutions
- Yellow SSP - zoo population ↓
- Endangered – wild population ↓
- Challenges that affect this program:
 - 1-3 new holders needed to meet population target
 - CWD concerns restricting movement of deer between facilities- but moving is possible!
- What can TAG do to help program & improve sustainability?
 - Eld's deer is currently a Deer TAG priority! Need big deer, get Eld's deer!
 - New push for more conservation research involvement by Eld's deer facilities. Make a big impact by getting involved! Contact the Program leader to find out how.



Program leader

- Dolores Reed
- Smithsonian Conservation Biology Institute
- reeddm@si.edu
- 540.635.6524

Malayan chevrotain

Tragulus napu

- 10.17 (27) in 10 institutions
- Red Program - zoo population ↑
- Least Concern – wild population ↓
- Challenges that affect this program:
 - New genetics needed
 - Breeding facilities to be able to hold offspring
- What can TAG do to help program & improve sustainability?
 - Assist in feasibility of animal import from Singapore Zoo. Are U.S. facilities interested in importing animals? If you are, contact the program leader.
 - Breeding facilities should send mortality info to program leader for any deaths under 1 year of age for a first-year mortality study.



Program leader

- Hulya Tansu Khambatta
- Bronx Zoo
- hkhambatta@wcs.org
- 718.741.1752

Pere David's deer

Elaphurus davidianus

- 45.73.1 (119) in 9 institutions
- Yellow SSP – zoo population, stable
- Classified (EW) extinct in the wild, but small free ranging populations have become established.
- Challenges that affect this program:
 - Need more breeding groups in current holding facilities
- What can TAG do to help program & improve sustainability?
 - Encourage more institutions to house/breed this species
 - Start collecting post-mortem DNA samples for future genetic study



Program leader

- Beth Schille
- Disney Animal Kingdom
- Beth.schille@disney.com
- 407.938.3201

Tufted Deer

Elaphodus cephalophus

- 23.19 (42) in 16 institutions
- Yellow SSP - zoo population ↓
- Near Threatened – wild population ↓
- Challenges that affect this program:
 - A few extra males
 - New genetics may be needed in the future
- What can TAG do to help program & improve sustainability?
 - Replace musk deer & Mexican red brocket deer phase-outs with tufted deer



Photo credit: Brent Huffman

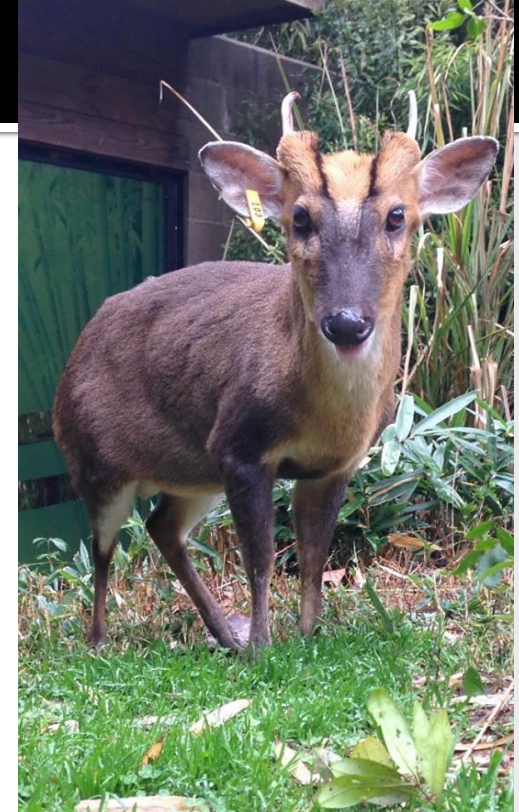
Program leader

- Elizabeth Johnson
- Naples Zoo
- ejohnson@napleszoo.org
- 239-262-5409 x155

Reeve's Muntjac

Muntiacus reevesi

- 53.45 (98) at 43 institutions (29 inst. are AZA)
- Yellow SSP – zoo population, stable
- Least Concern – wild population ↓
- Challenges that affect this program
 - First studbook published in 2019!!
 - (Currentness date is December 2017)- this first studbook was a challenge to produce, now it just needs to be updated and the first B&T Plan completed
- What can the TAG do to help improve the program & sustainability issues?
 - Encourage institutions to reach out to Program Leader for breeding recommendations until population genetics can be determined to minimize potential inbreeding.
 - Support new Large-antlered muntjac Conservation Project!!
 - Determine whether bringing in phase-out EAZA animals will help AZA population



Program Leader

- Elana Kopel
- Prospect Park Zoo
- ekopel@wcs.org
- 718-399-7339 x101

Moose

Alces alces

- 7.18 (25) in 11 institutions
- Registry/Monitored population- this program is now a **Registry** that just went through one last B&T planning session with new Registry Coordinator. Mike will be assisting facilities with a wants/needs list to transfer animals and help with placing orphan animals. Please contact him if you are looking for an animal or if you need to place an animal as he will be keeping a list.
- Stable wild population
- Orphans from Alaska are available yearly



Registry Coordinator

- Mike Teller
- Calgary Zoo
- MikeT@calgaryzoo.com
- 403-232-9321

Bactrian wapiti

Cervus hanglu bactrianus

Registry Coordinator

- Curt Coleman
- the Wilds
- ccoleman@thewilds.org
- 740-638-5030



- 36.46.6 (88) in 3 institutions
- **Registry- monitoring only**

- This species is currently being managed between 2 or 3 AZA facilities for exhibition and biodiversity. The lack of interest from new holders and difficulties to transport due to CWD restrictions has determined these species to be a monitored program only. The population will be managed by those facilities by rotating males on an as-needed basis.

White-lipped deer

Cervus albirostris

Registry Coordinator

- Alana Auwae
- Rosamond Gifford Zoo
- AlanaAuwae@ongov.net



- 5.13 (18) in 2 institutions
- Likely over 100 in 2 non-AZA facilities
- **Registry- monitoring only**

Siberian musk deer

Moschus moschiferus

- **Phase-out**
- The AZA Cervid TAG is working with the EAZA EEP to transfer all remaining healthy, breeding-aged animals to the EU to bolster their small population.
- The TAG is recommending holding facilities replace musk deer with tufted deer or Southern pudu.
- A big thank you goes out to **Matt Ardaiole** who gave a great effort to try to salvage this species in AZA. He is now assisting in the management of the population while an international transfer is being planned.



©Brent Huffman, www.ultimateungulate.com

Program leader

- Matt Ardaiole
- Denver Zoo
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2021 Virtual Midyear Meeting Program Updates

AZA Equid TAG

Chair, Tim Thier, tthier@stlzoo.org

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Asian wild horse

- 53.64 (117) in 19 institutions
- Yellow SSP - zoo population, stable
- Endangered – wild population ↑
- Challenges that adversely affect program:
 - Compliance with SSP recommendations
 - Zoos reluctant to hold bachelor groups
- What TAG can do to help program & improve sustainability?
 - Encourage institutional cooperation with SSP plans
 - Support Mongolian conservation efforts
<http://support.mnzoo.org/truewildhorse/>



Program Leaders

- Tony Fisher-SSP
- Minnesota Zoo
- tony.fisher@state.mn.us
- 952-431-9275
- Amanda Faliano – Studbook
- Denver Zoo
- Afaliano@denverzoo.org
- 720-337-1531

Grevy's zebra

Equus grevyi

- 55.100 (155) at 35 institutions
- Green Program - zoo population ↑
- Endangered— wild population (stable)*
- Challenges that adversely affect program:
 - Due to space constraints it is important to identify additional holding institutions.
 - Male holding space is an SSP priority. Zoos with breeding herds need to be able to house male offspring for 2-4 years. Facilities for separating stallions should include outdoor access.
- What TAG can do to help program & improve sustainability?
 - **TAG Recommendation:** Zoos with common (plains) zebras in single-species exhibits are urged to replace them with Grevy's zebras.

*IUCN red list



Photo by: Katie Pilgram-Kloppe

Martha Fischer

AZA SSP Coordinator

Saint Louis Zoo

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fischer@stlzoo.org

Katie Pilgram-Kloppe

AZA NA Stbk Keeper

Saint Louis Zoo

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pilgram@stlzoo.org

Hartmann's mountain zebra

Equus zebra hartmannae

- Population 29.50 (79) in 19 institutions.
- **Yellow SSP Program-Zoo population stable**
- Vulnerable in the wild, population trending up.
- **Challenges that affect program:**
 - Low genetic stock
 - Available surplus females
 - Need for holding bachelor groups
- **What can the TAG do to help this program & improve sustainability?**
 - Continue to encourage institutions to house Hartmann's Mountain Zebra.



Program Leader

- Tommy Jordan
- San Diego Zoo Safari Park
- tjordan@sdzwa.org
- 760-708-9264

Persian onager

- 10.22 (32) in 3 institutions
- Red SSP - zoo population ↓
- Endangered – wild population stable
- Breeding and Transfer Plan Published August 2020
- Challenges that affect this program:
 - Lack of space/holders needed
 - New genetics needed
- What can TAG do to help program & improve sustainability?
 - More holders or space needed to breed and maintain GD
 - Expand gene pool by managing at species rather than sub-species level



Program Leader

- Kate Volz
- Smithsonian National Zoological Park
- volzk@si.edu
- 202-673-3675

Plains zebra

- 73.172.1 (246) in 68 institutions
- Yellow program
- Near Threatened – wild population decreasing
- Challenges that adversely affect program:
 - Lack of intact males
 - Genetics- new genetics needed
- What TAG can do to help program & improve sustainability?
 - Keep viable males intact for breeding recommendations.
 - Possible bachelor herd facilities.



Program leader

- John Register
- Houston Zoo
- jregister@houstonzoo.org
- 713-533-6682

Somali wild ass

- 27.44 (71) in 9 institutions
- Yellow SSP - zoo population ↑
- Critically Endangered – wild population ↓

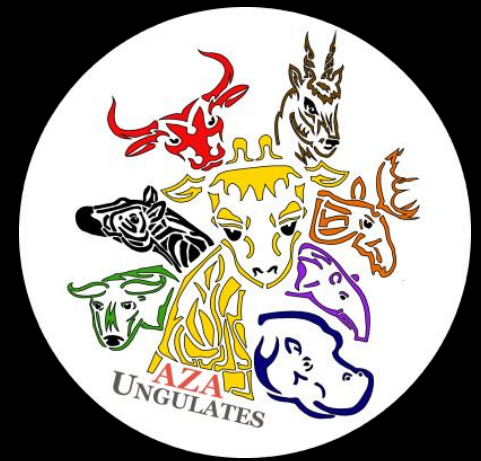
- **Challenges that affect program:**
 - Lack of space - more holders needed

- **What TAG can do to help program & improve sustainability?**
 - Increase holding institutions to meet target population



Program Leader

- Yaraila Rodriguez
- Saint Louis Zoo
- Yrodriguez@white-oak.org
- 407-748-6638



2021 Virtual Midyear Meeting Program Updates

AZA Hippo, Pig, Peccary & Tapir TAG

Chair, Martin Ramirez, Martin.Ramirez@Zoo.org

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River hippopotamus

- 25.54(79) at 31 institutions
- Yellow SSP - zoo population stable
- Vulnerable - wild population ↓
- Challenges that affect this program:
 - Many institutions hold only female pairs, which limits the number of potential breeding pairs and can make males difficult to place .
 - Current exhibit spaces limit opportunities for successful introductions, breeding and managing male offspring.
- What can TAG do to help program & improve sustainability?
 - Maintain current population size with 3-4 births/year.
 - Consider forming and breeding new pairs within existing spaces.
 - New breeding facilities should be capable of holding at least two adult females per adult male and allow for separation of adult males from females and their offspring.



Program Leader

- John Davis
- Riverbanks Zoo
- Jdavis@riverbanks.or
- 803-602-0886

Pygmy Hippopotamus

- 38.75.9(122) in 19 institutions
 - 13 AZA organizations
 - 5 Non-AZA organizations
 - 1 Sustainability Partner
- Red SSP - zoo population slowly ↑
- Endangered – wild population ↓
- Challenges that adversely affect program:
 - Female-biased sex ratio
 - Several new institutions with readiness timelines over the next 2 to 5 years
 - Non-AZA facilities are moving hippos to non-AZA facilities that are not part of the SSP. With the new changes on the horizon, this could be problematic when it comes to tracking animals as to not lose SSP animals.



Program Leader

- Christie Eddie
- Omaha's Henry Doorly Zoo and Aquarium
- christiee@omahazoo.com
- 402-557-6932

Babirusa

- 27.37 (64) animals in 20 institutions
- Yellow SSP - zoo population stable
- Endangered – wild population decreasing due to illegal hunting and habitat loss.
- GSMP program working with Action Indonesia. All holders encouraged to support the program.
- This Program welcomes new institutions to help the population continue to grow.
- Babirusa are a wonderful species to work with. They are a hit with staff and guests.



Program Leader

- Joe Forys
- Audubon Zoo
- jforys@auduboninstitute.org

Chacoan peccary

- 45.56.0 (110) at 22 zoos
- Yellow SSP - zoo population ↑
- Endangered - wild population ↓
- Challenges that affect this program:
Additional funding sources needed for CCCI and an import.
- What can TAG do to help program & improve sustainability?
 - Encourage more institutions to work with this low maintenance and charismatic endangered species.



Program Leader

- Jim Haigwood
- San Diego Zoo Safari Park
- jhaigwood@sdzwa.org
- 760.705.6543

Common warthog

- 42.54.1 (97) @ 37 AZA institutions
- Yellow SSP – zoo population decreasing due to deaths exceeding births and exports out of population to non-AZA facilities
- IUCN status – Least Concern, stable
- Studbook moved to ZIMS in 2020 and was published in 2020. We will do another update before B&T planning.
- **BREEDING and TRANSFER Planning will be happening in summer 2021 – Let Lisa know your wants and needs!**
- **Challenges that adversely affect program:**
 - Inbreeding – lack of unrelated adult animals
 - Holding of offspring past 1 yr. makes space a challenge and makes institutions not want to breed.
- **What Institutions can do to help program & improve sustainability?**
 - Import new known genetics!
 - Increase holding capacity when building new or renovating exhibits/holding areas.



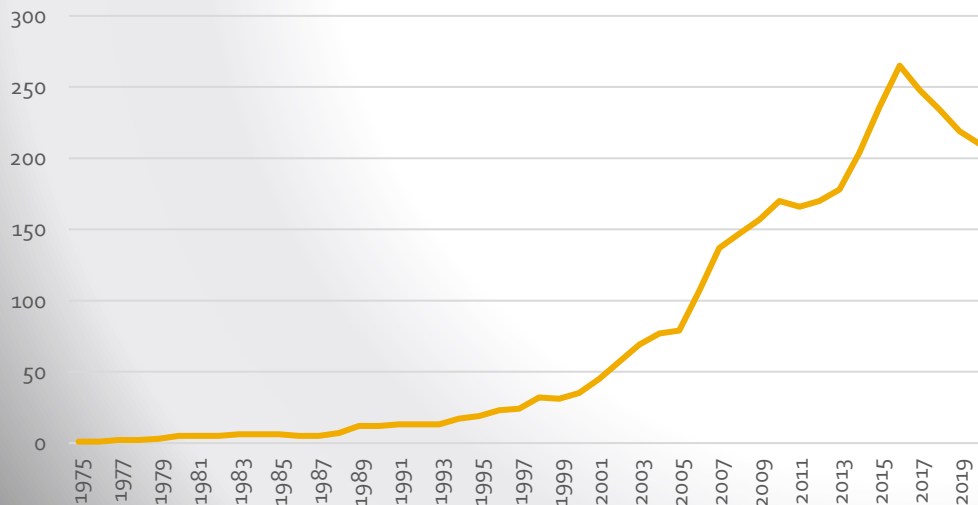
Program leader

- Lisa Smith
- Buffalo Zoo
- Lsmith@buffalozoo.org
- (716) 995-6130

Red river hog

- 95.108.5 (208)
 - 139 in 46 AZA institutions
 - 69 in 18 non-AZA institutions
- Yellow SSP- zoo population ↓
- Least Concern - wild population ↓

RRH Population by Year



Program Leaders

- Matt James
- Dallas Zoo
- matt.james@dallaszoo.com

- Ali Rackley – Studbook
- Dallas Zoo
- alison.rackley@dallaszoo.com

Visayan warty pig

- 34.38 (72) in 19 institutions (15 AZA, 5 non-AZA)
- Yellow SSP - zoo population stable
- Critically Endangered - wild population ↓
- Last Population Plan April 23, 2019
- Last Studbook April 15, 2020
- Challenges that affect this program:
 - Potential that females are shutting down following relatively short periods of being in non-reproductive situations, though a female at Portland delivered successfully after not being pregnant for ~ 8 years
 - Have had some aggression issues in single sex groups
- What can TAG do to help program & improve sustainability?
 - Looking for more holders
- San Diego Zoo has mixed them with Malayan tapir



Photo: Jacksonville Zoo and Gardens

- Craig Miller – SSP Coordinator
 - Jacksonville Zoo and Gardens
 - millerc@jaxzoo.org
 - 904-757-4463 x136
- Stephanie DeYoung – Studbook Keeper
 - Elephant Sanctuary in Tennessee
 - stephanie@elephants.com
 - 325-518-6141

Asian (Malayan) Tapir

- 18.18 (36) at 17 AZA institutions.
 - 6.7 (13) CCTU
 - 1.1 (2) Parc Safari (Canada)
 - 0.1 Rutledge
- Red SSP- zoo population below target.
 - 4 births (3.1) Jan 2019-Jan 2021
- Endangered- wild population ↓
- Challenges that affect this program:
 - New founder animals needed
 - Additional spaces needed
- What can TAG do help program & improve sustainability?
 - Encourage institutions to add this species



Program leader

- Ivy Brower
- Zoo Miami
- Ivy.Brower@miamidade.gov
- 305-251-0400 x 5084869

Baird's Tapir

- 24.19 (43) at 15 AZA and 5 non-AZA institutions
- Yellow SSP - zoo population
- Endangered - wild population ↓
- Challenges that affect this program:
 - New founders needed.
 - More males than females in population.



Program Leader/International
Studbook Keeper

- Carolina Holguin
- Africam Safari
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2021 Virtual Midyear Meeting Program Updates

AZA Rhino TAG

Chair, Adam Eyres, adame@fossilrim.org

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Eastern Black Rhino

- 29.26.1 (56) in 23 AZA institutions
- **YELLOW SSP – zoo population stable**
- Endangered – wild population improving in some areas, still being poached heavily in others.
- Breeding & Transfer Plan coming soon. Master planning was on March 17th, 2021
- Changes since last year
 - 3.0 births recently
- Challenges that adversely affect program:
 - Low birth rates, long inter-birth interval, and early embryo loss
 - Additional spaces needed



- SSP Coordinator
 - Lisa Smith
 - Buffalo Zoo
 - Lsmith@buffalozoo.org
 - 716.995.6130
- Studbook/Population Biologist
 - Gina Ferrie
 - Disney's Animal Kingdom
 - Gina.M.Ferrie@Disney.com

White Rhino

- 102.184.0 (286) rhinos in 50 AZA facilities and 1 sustainability partner.
- **GREEN SSP**
- Status in the wild— Vulnerable. Poaching is somewhat reduced, but overall numbers are lower than previously indicated.
- Breeding and Transfer Plan draft went out for comment in March 2021



Adam Eyes- SSP Coordinator

- Fossil Rim Wildlife Center, adame@fossilrim.org

Dan Beetem- SSP Vice Coordinator

- The Wilds, dbeetem@thewilds.org

Jonnie Capiro- Studbook Keeper

- San Diego Zoo Wildlife Alliance, Jcapiro@sdzwa.org

Jamie Ivy- Population Biologist

- San Diego Zoo Wildlife Alliance, Jivy@sdzwa.org

Greater one-horned rhino

- 3.43.0 (78) rhinos in 19 AZA facilities and one Sustainability Partner
- **YELLOW SSP**
- Endangered Wild populations are improving through IRV2020 and the future plans for conservation of the species.
- Master Planning took place on February 23rd, 2021. Breeding and Transfer draft plan should go out for comments within the month.
- A strong push should be made in each facility to train for reliable blood collections
- Any facilities that are being renovated or built from new should avoid concrete and implement soft surface areas.



Jim Haigwood- SSP Coordinator

- San Diego Zoo Wildlife Alliance, Jhaigwood@sdzwa.org

Joe Hauser- Studbook Keeper

- Buffalo Zoo, Jhauser@buffalozoo.org

Jamie Ivy- Population Biologist

- San Diego Zoo Wildlife Alliance, Jivy@sdzwa.org