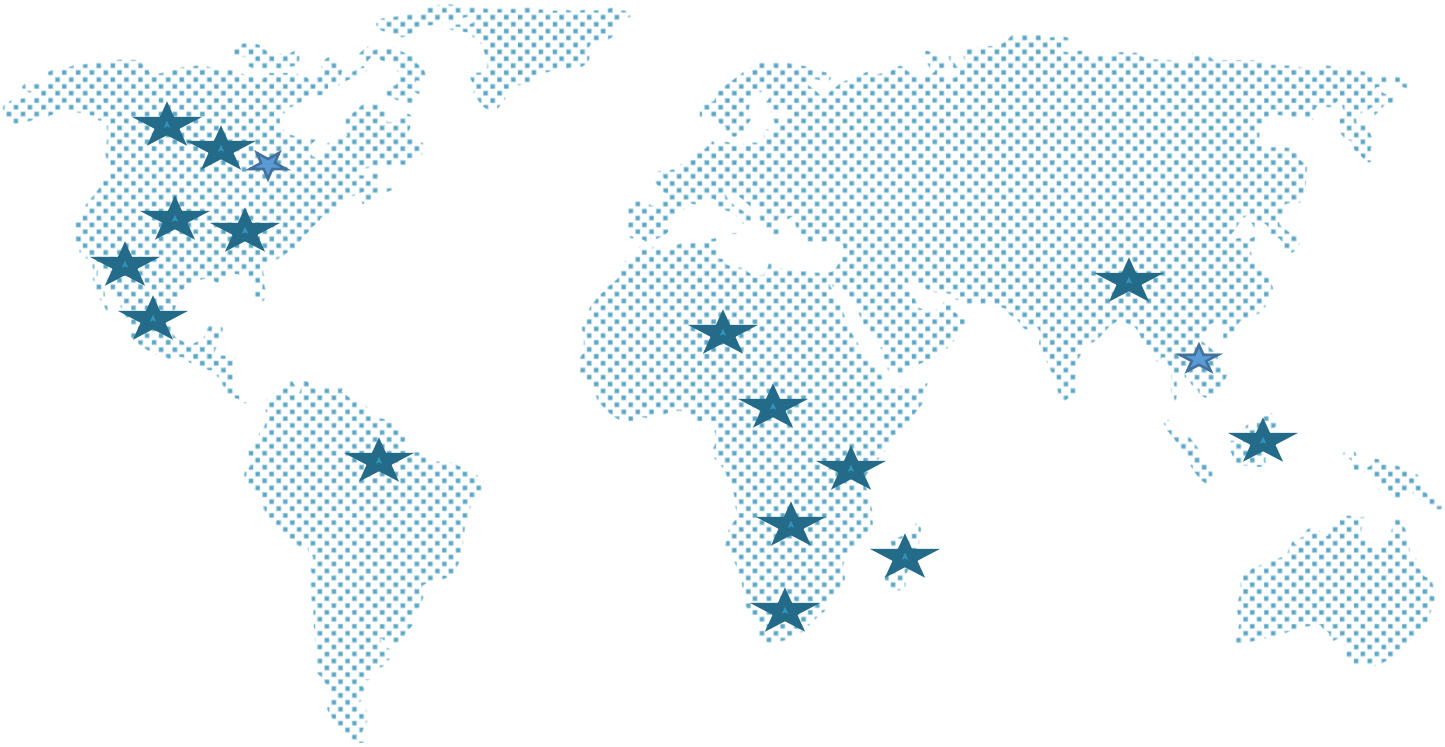
# SMALL CARNIVORE TAG

*Regional Collection Plan* *5th Edition, 2020*



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Compiled by: Small Carnivore TAG Steering Committee

**TABLE OF CONTENTS**



**Cover photos by: Banded mongoose-Judith Wolfe, Asian small clawed otter-Cleveland Zoo, Binturong-Jim Shulz, Meerkat-Amy Hawley, Red panda-Sarah Glass, Dwarf mongoose-Cathy Burkey, Giant otter-Jan Reed-Smith, Kinkajou-Liz Toth, Spotted-necked otter-Jenna Kocourek, Fossa-Ron Settle**

## Introduction:

The Small Carnivore Taxon Advisory Group (SCTAG) of the Association of Zoos and Aquariums (AZA) includes nine families under the order Carnivora: Mustelidae, Viverridae, Procyonidae, Ailuridae, Eupleridae, Nandiniidae, Mephitidae, Herpestidae, and Prionodontidae (1&4). All species of these nine families are covered under the TAG with the exception of *Enhydra lutris* (sea otter) which is covered under the Marine Mammal TAG.

In the next year, the SCTAG will be reorganizing itself and restablishing plans for the AZA collections of small carnivores and in situ conservation work. The TAG will be recruiting assistance for reviewing plans, animal care manuals, and additional leadership. There will be more outreach through the Facebook page and the promotion of SAFE Programs. With the fresh insight of the new recruits, the TAG will look into the Ambassador animal issue further and make recommendations ensuring that the AZA Ambassador Animal Policy is followed.

The SCTAG will hold a planning meeting in 2021. At this meeting we will install our new Steering Committee Members and rededicate ourselves to reaching the TAG's goals. A major initiative of this meeting will be to critically assess the existing animal programs. The population numbers, available resources and facilities' interest must be reconciled to determine the viability of some of the TAG's programs. This could lead to changes in the designations of some these programs.

The major challenges faced by the SCTAG are the same as for many of the species in many of the AZA's TAGs: Some populations are not sustainable in human care. There is low institutional interest for the lesser charismatic animals. With some revived interest from the Steering Committee and the Institutional Representatives we hope to turn this trend around for our designated species without negatively affecting the successful programs. We are aware that ex-situ conservation is necessary to save species as well as our in-situ efforts. We will work with the IUCN and other regions to collaborate with efforts like the "One Plan Approach." Perhaps showing institutions that there is a bigger picture that they can be a part of can turn some of the programs around.

**RCP History:**

The SCTAG published its original Regional Collection Plan (RCP) under the direction of Greta McMillian and the Steering Committee in 1999. The first revision was published under the direction of Dusty Lombardi and the Steering Committee in 2005, the second revision in 2009, and third revision in 2014.

This RCP is a dynamic document and will continue to change as conditions for zoo and wild populations change.

**Mission Statement:**

To facilitate activities and programs that promote small carnivore conservation in situ and ex situ, as well as to provide guidance and recommendations to AZA institutions regarding husbandry, population management, and the welfare of small carnivore species.

**Small Carnivore Taxon Advisory Group Goals:**

**Goal 1:** The key to the long-term program sustainability and continuity of leadership is the need to maintain a diverse group of experts in leadership positions. To that end, the Small Carnivore TAG will hold a Steering Committee election in early 2021, and by September 2021 all SSPs will have Vice Coordinators and form appropriately/proportionately sized management groups. While not required by AZA, the management groups will provide support and expertise to the required leadership positions, enhance programmatic stability and continuity, and foster succession-planning opportunities.

**Goal 2:** Animal care guidelines (ACM) are vital to the sustainability of our managed species programs as well as to the welfare of individual small carnivores in our care. The Small Carnivore TAG was the first to complete their Animal Care Manuals. The six documents were first published between 2002 and 2012 with some having revisions since. Others have not been revised. Therefore, we will review and update all of the Animal Care Guidelines by 2023. Program leaders will champion their species and collaborate with subject matter experts and their newly formed management groups.

**Goal 3:** Support activities for AZA's Saving Animals from Extinction, SAFE, program specific to small carnivores. The black-footed ferret has been an approved SAFE program since August 2017. The TAG will propose two additional small carnivore SAFE programs by December 2024. The Steering Committee will recruit and support two program leaders to champion their species towards these ends.

**Goal 4:** Create monthly Species Spotlights for the Small Carnivore TAG Facebook page. Content to include ideas and notables such as enrichment, conservation, colleague partnerships, etc. Amanda Ista and Jennifer Compston, the TAG Secretary, will work with the program leaders to develop a schedule for posting the content based around existing animal days. Start posting materials in November 2020 and monthly thereafter.

**Goal 5:** The Veterinary Advisors for the Small Carnivore TAG will conduct a survey to see how the institutions' veterinarians will be willing to submit information for collecting disease and mortality information. This survey will be conducted by June 2021. Afterwards, they will communicate with the SSP advisors within the TAG to coordinate the collection of necropsy and other medical information. They will also create a database of reference articles accessible to TAG members on a platform like Mendeley for the dissemination of veterinary information. The timeline for starting the database is also June 2021, but will be ever changing and growing.

**SCTAG Structure:**

The SCTAG consists of a 13 member Steering Committee including three officers (Chair, Vice-Chair, & Secretary), and non-voting Program Leaders, Advisors, along with the TAG Animal Population Management Committee (APM) liaison. Also according to the AZA's guidelines for TAGs (3) each participating institution must assign an Institutional Representative (IR) to the TAG. The primary responsibility of the IR is to communicate with the committee and disseminate information from the SCTAG to their respective institution. Communication with the IRs is through the AZA Network group and at the annual meetings. Steering Committee Members and Advisors communicate via e-mail and listservs.

aza_smallcarnivoretagsteeringcommittee@connectedcommunity.org is an AZA Network Group that includes TAG Chair, Vice Chair, Secretary, Steering Committee Members, Advisors, and APM liaison. This Network Group is used to provide a confidential method of conducting TAG business.

aza_smallcarnivoretag@connectedcommunity.org is an AZA Network Group that includes Officers, Committee Members and IRs and any individual interested in the TAG. This Network Group is used for general communications from the TAG.

3: Association of Zoos and Aquariums (2018). Taxon Advisory Group (TAG) Handbook. Association of Zoos and Aquariums, Silver Spring, MD.

## TAG Operational Structure

| | | | |
|---|---|---|---|
| **Chair:** | David Hamilton, Seneca Park Zoo | dhamilton@monroecounty.gov | 585-753-2502 |
| **Vice Chair:** | Vacant | | |
| **Secretary:** | Jennifer Compston, Columbus Zoo | jennifer.compston@columbuszoo.org | 614-724-3449 |
| **Steering Committee Members:** | | | |
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| | Katie Govern, ZooAmerica | kagovern@hersheypa.com | 717-534-3864 |
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| | John Ward, Fort Worth Zoo | jward@fortworthzoo.org | 817-759-7196 |
| | Vacant | | |
| | Vacant | | |
| **Steering Committee Advisors:** | | | |
| | Dusty Lombardi, Ohio Wildlife Center | dlombardi@ohiowildlifecenter.org | 614-734-9453 |
| | Nora Beirne, Central Park Zoo | nbeirne@wcs.org | 212-439-6505 |
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| | Teresa Shepard, Omaha's Henry Doorly Zoo | jungle@omahazoo.com | 402-733-8400 |
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| | Liz Toth, Boonshoft Museum of Discovery | LToth@boonshoftmuseum.org | 937-275-7431 |
| | Laurie Treschel, Minnesota Zoo | laurie.trechsel@state.mn.us | 952-431-9362 |
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| **Reproductive Advisor:** | | | |
| | Cheryl Asa, Saint Louis Zoo | asa@stlzoo.org | |
| **Nutrition Advisors:** | | | |
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| **APM Liaison:** | Hollie Colahan, Birmingham Zoo | hcolahan@birminghamzoo.com | 205-397-3848 |

We would like to thank all of the Small Carnivore TAG Steering Committee, Program Leaders, Advisors, Institutional Representatives and the PMC for their assistance on this Regional Collection plan. With special thanks to Dusty Lombardi, David Hamilton, and Jennifer Compston for the final edits and compiling the RCP.

**Taxa Conservation Status**

In 2014 there were 165 species represented in the Small Carnivore taxa with six endangered according to the United States Fish and Wildlife Service (USFWS); seven endangered, three Critically Endangered and one extinct according to the IUCN Red List and CITES listed nine species under Appendix I. In updating for 2019, 177 species are now represented with nine endangered and one extinct in the wild according to USFWS; 14 endangered, three critically endangered, and two extinct in the wild according to IUNC Red List, and nine species under CITES Appendix I.

There are now nine families that fall under the Small Carnivore TAG: Mustelidae, Viverridae, Procyonidae, Ailuridae, Mephitidae, Herpestidae, Eupleridae, Nandiniidae and a new family, Prionodontidae. However, the majority of these species have never been held in human care nor are they likely to be obtained from the wild. A review of all species was performed and is contained in this document. A complete list of these species contained in the RCP can be found in Table 1.

Mustelidae (wolverine, ferrets, badgers, otters): there are two subfamilies, 22 genera and 59 species (1). Six species are represented for management under the TAG. These species are found in all land areas of the world except West Indies, Madagascar, Sulawesi and the Islands to the East, most of the Philippines, New Guinea, Australia, New Zealand, Antarctica, and most oceanic Islands(2).

Viverridae (civets, genets, oyans): there are three subfamilies, 14 genera and 33 species (1,4). One species is represented for management under the TAG. These species are found in Southwestern Europe, Southern Asia, East Indies, Africa, and Madagascar (2).

Procyonidae (raccoons, kinkajou, cacomistle, ringtail, coatimundi): there are two subfamilies, six genera and 14 species (1). Three species are represented for management under the TAG. These 14 species are found in temperate and tropical areas of the Western Hemisphere (2).

Herpestidae (mongoose and meerkat): there are no subfamilies, 14 genera and 33 species (1). Three species are represented for management under the TAG. These species are found in southern Asia, East Indies, and Africa (2).

Eupleridae (Malagasy carnivores, fossa): there are two subfamilies, seven genera and eight species (1). One species is managed under the TAG. These eight species are found in Madagascar (2).

Ailuridae (red panda): there is one genus, one species and two subspecies (1). Both subspecies are recommended for management under the TAG. They are found in Asia (2).

Mephitidae (skunks): there are no subfamilies, four genera and 12 species (1). None of these species are recommended for management under the TAG. They are found in North and South America (2).

Nandiniidae (palm civet): there is one genera, one species and four subspecies (1). None of the subspecies are represented for management under the TAG. These species are found in Africa (2).

Prionodontidae (linsangs): there is one genera and two species (4). Neither of the species are represented for management under the TAG. These species are found in Southern Asia (2)

1: Don E. Wilson & DeeAnn M. Reeder (editors). 2005. *Mammal Species of the World. A Taxonomic and Geographic Reference (3rd ed)*, Web. 2019. https://www.departments.bucknell.edu/biology/resources/msw3/

2: Walker, Ernest P. *Walker's Mammals of the World Sixth Edition.* Ed. Ronald M Nowak. Baltimore & London: John Hopkins University Press, 1999. Print.

3: Association of Zoos and Aquariums (2018). Taxon Advisory Group (TAG) Handbook. Association of Zoos and Aquariums, Silver Spring, MD.

4: IUCN Small Carnivore Specialist Group. Web 2019. Iucn-scsg.org/species-accounts.html.

TABLE 1: Conservation status of Taxa

| Common Name | IUCN Taxa | ZIMS Taxa | Wilson Reeder | Red List | CITES | USFWS |
|---|---|---|---|---|---|---|
| Red panda (Green) ** | *Ailurus fulgens* | *Ailurus fulgens* | *Ailurus fulgens* | Endangered | Appendix I | |
| Red panda (Green) ** | *Ailurus fulgens* | *Ailurus fulgens refulgens* | *Ailurus fulgens refulgens* | | | |
| North American river otter (Green) | *Lontra canadensis* | *Lontra canadensis* | *Lontra canadensis* | Least Concern | Appendix II | |
| Meerkat (Green) | *Suricata suricatta* | *Suricata suricatta* | *Suricata suricatta* | Least Concern | | |
| Asian small-clawed otter (Yellow) | *Aonyx cinereus* | *Aonyx cinereus* | *Aonyx cinerea* | Vulnerable | Appendix II | |
| Binturong (Yellow) | *Arctictis binturong* | *Arctictis binturong* | *Arctictis binturong* | Vulnerable | Appendix III (India) | |
| Fossa (Yellow) | *Cryptoprocto ferox* | *Cryptoprocta ferox* | *Cryptoprocto ferox* | Vulnerable | Appendix II | |
| Common dwarf mongoose (Yellow) | *Helogale parvula* | *Helogale parvula* | *Helogale parvula* | Least Concern | | |
| Banded mongoose (Yellow) | *Mungos mungo* | *Mungos mungo* | *Mungos mungo* | Least Concern | | |
| Black-footed ferret (Yellow) | *Mustela nigripes* | *Mustela nigripes* | *Mustela nigripes* | Endangered | | Endangered |
| White-nosed coati (Yellow) | *Nasua narica* | *Nasua narica* | *Nasua narica* | Least Concern | Appendix III (Honduras) | |
| Kinkajou (Yellow) | *Potos flavus* | *Potos flavus* | *Potos flavus* | Least Concern | Appendix III (Honduras) | |
| Ringtail (Red) | *Bassariscus astutus* | *Bassariscus astutus* | *Bassariscus astutus* | Least Concern | | |
| Spotted-necked otter (Red) | *Hydrictis maculicollis* | *Hydrictis maculicollis* | *Lutra maculicollis* | Near Threatened | Appendix II | |
| Giant otter (Red) | *Pteronura brasiliensis* | *Pteronura brasiliensis* | *Pteronura brasiliensis* | Endangered | Appendix I | Endangered |
| Wolverine (Candidate) | *Gulo gulo* | *Gulo gulo* | *Gulo gulo* | Least Concern | | |
| Fisher (Candidate) | *Martes pennanti* | *Martes pennanti* | *Martes pennanti* | Least Concern | | |
| Striped skunk (Candidate) | *Mephitis mephitis* | *Mephitis mephitis* | *Mephitis mephitis* | Least Concern | | |

**IUCN Red List of Threatened Species web site, www.redlist.org/ [Accessed 2019]

~ Convention on International Trade in Endangered species of Wild Fauna and Flora 2017. Available at: cites.org/eng/app/appendices.php [Accessed (2019)].

* Don E. Wilson & DeeAnn M. Reeder (editors). 2005. *Mammal Species of the World. A Taxonomic and Geographic Reference (3rd ed)*, Web. 2019. https://www.departments.bucknell.edu/biology/resources/msw3/

+ U.S. Fish and Wildlife Website, Endangered and Threatened Species Listing. Web. 2019. http://www.fws.gov/endangered/

| Common Name | IUCN Taxa | ZIMS Taxa | Wilson Reeder | Red List | CITES | USFWS |
|---|---|---|---|---|---|---|
| African clawless otter | *Aonyx capensis* | *Aonyx capensis* | *Aonyx capensis* | Near Threatened | Appendix II, Appendix I (Cameroon & Nigeria) | |
| Cameroon (Congo)clawless otter | *Aonyx congicus* | *Aonyx capensis congica* | *Aonyx congicus* | Near Threatened | | Endangered |
| Small-tooth palm civet (Three-striped palm civet) | *Arctogalidia trivirgata* | *Arctogalidia trivirgata* | *Arctogalidia trivirgata* | Least Concern | | |
| Northern hog badger | *Arctonyx albogularis* | *Arctonyx collaris albogularis* | *Arctonyx collaris albogularis* | Least Concern | | |
| Greater hog badger (Hog badger) | *Arctonyx collaris* | *Arctonyx collaris* | *Arctonyx collaris* | Vulnerable | | |
| Sumatran hog badger | *Arctonyx hoevenii* | *Arctonyx collaris hoevenii* | *Arctonyx collaris hoevenii* | Least Concern | | |
| Marsh mongoose | *Atilax paludinosus* | *Atilax paludinosus* | *Atilax paludinosus* | Least Concern | | |
| Eastern Lowland olingo (Allen's olingo) | *Bassaricyon alleni* | *Bassaricyon alleni* | *Bassaricyon alleni* | Least Concern | | |
| Northern olingo (Bushy-tailed olingo) | *Bassaricyon gabbii* | *Bassaricyon gabbii* | *Bassaricyon gabbii* | Least Concern | Appendix III (Costa Rica) | |
| Western lowland olingo (Bushy-tailed olingo) | *Bassaricyon medius* | *Bassaricyon gabbii medius* | *not listed* | Least Concern | | |
| Olinguito | *Bassaricyon neblina* | *Bassaricyon neblina* | *not listed* | Near Threatened | | |
| Cacomistle | *Bassariscus sumichrasti* | *Bassariscus sumichrasti* | *Bassariscus sumichrasti* | Least Concern | Appendix III (Costa Rica) | |
| Bushy-tailed mongoose | *Bdeogale crassicauda* | *Bdeogale crassicauda* | *Bdeogale crassicauda* | Least Concern | | |
| Jackson's mongoose | *Bdeogale jacksoni* | *Bdeogale jacksoni* | *Bdeogale jacksoni* | Near Threatened | | |
| Black-legged mongoose | *Bdeogale nigripes* | *Bdeogale nigripes* | *Bdeogale nigripes* | Least Concern | | |
| Sokoke dog mongoose | *Bdeogale omnivora* | *Bdeogale crassicauda omnivora* | *Bdeogale crassicauda omnivora* | Vulnerable | | |
| Owston's palm civet | *Chrotogale owstoni* | *Chrotogale owstoni* | *Chrotogale owstoni* | Endangered | | |
| African civet | *Civettictis civetta* | *Civettictis civetta* | *Civettictis civetta* | Least Concern | Appendix III (Botswana) | |
| Molina's hog-nosed skunk | *Conepatus chinga* | *Conepatus chinga* | *Conepatus chinga* | Least Concern | | |
| Humboldt's hog-nosed skunk | *Conepatus humboldtii* | *Conepatus humboldtii* | *Conepatus humboldtii* | Least Concern | | |

**IUCN Red List of Threatened Species web site, www.redlist.org/ [Accessed 2019]

~ Convention on International Trade in Endangered species of Wild Fauna and Flora 2017. Available at: cites.org/eng/app/appendices.php [Accessed (2019)].

* Don E. Wilson & DeeAnn M. Reeder (editors). 2005. *Mammal Species of the World. A Taxonomic and Geographic Reference (3rd ed)*, Web. 2019. https://www.departments.bucknell.edu/biology/resources/msw3/

+ U.S. Fish and Wildlife Website, Endangered and Threatened Species Listing. Web. 2019. http://www.fws.gov/endangered/

| Common Name | IUCN Taxa | ZIMS Taxa | Wilson Reeder | Red List | CITES | USFWS |
|---|---|---|---|---|---|---|
| American hog-nosed skunk | *Conepatus leuconotus* | *Conepatus leuconotus* | *Conepatus leuconotus* | Least Concern | | |
| Striped hog-nosed skunk | *Conepatus semistriatus* | *Conepatus semistriatus* | *Conepatus semistriatus* | Least Concern | | |
| Alexander's cusimanse (Congo kusimanse) | *Crossarchus alexandri* | *Crossarchus alexandri* | *Crossarchus alexandri* | | | |
| Ansorge's cusimanse (Angolan kusimanse) | *Crossarchus ansorgei* | *Crossarchus ansorgei* | *Crossarchus ansorgei* | Least Concern | | |
| Common cusimanse | *Crossarchus obscurus* | *Crossarchus obscurus* | *Crossarchus obscurus* | Least Concern | | |
| Flat-headed cusimanse (Flat-headed kusimanse) | *Crossarchus platycephalus* | *Crossarchus platycephalus* | *Crossarchus platycephalus* | Least Concern | | |
| Giant fosa | *Cryptoprocto spelea* | *not listed* | *not listed* | Extinct | | |
| Yellow mongoose | *Cynictis penicillata* | *Cynictis penicillata* | *Cynictis penicillata* | Least Concern | | |
| Otter civet | *Cynogale bennettii* | *Cynogale bennettii* | *Cynogale bennettii* | Endangered | Appendix II | |
| Hose's palm civet | *Diplogale hosei* | *Dipogale hosei* | *Dipogale hosei* | Vulnerable | | |
| Pousargues' mongoose | *Dologale dybowskii* | *Dologale dybowskii* | *Dologale dybowskii* | Data Deficient | | |
| Tayra | *Eira barbara* | *Eira barbara* | *Eira barbara* | Least Concern | Appendix III (Honduras) | |
| Eastern falanouc (Falanouc) | *Eupleres goudotii* | *Eupleres goudotii* | *Eupleres goudotii* | Vulnerable | Appendix II | |
| Western falanouc (Falanouc) | *Eupleres major* | *Eupleres goudotii major* | *Eupleres goudotii major* | Endangered | | |
| Spotted fanaloka (Malagasy civet) | *Fossa fossana* | *Fossa fossana* | *Fossa fossana* | Vulnerable | Appendix II | |
| Lesser grison (Little grison) | *Galictis cuja* | *Galictus cuja* | *Galictus cuja* | Least Concern | | |
| Greater grison | *Galictis vittata* | *Galictis vittata* | *Galictis vittata* | Least Concern | Appendix III (Costa Rica) | |
| Ring-tailed vontsira (Ring-tailed mongoose) | *Galidia elegans* | *Galidia elegans* | *Galidia elegans* | Least Concern | | |
| Broad-striped mongoose | *Galidictis fasciata* | *Galidictis fasciata* | *Galidictis fasciata* | Vulnerable | | |
| Grandidier's vontsira | *Galidictis grandidieri* | *Galidictis grandidieri* | *Galidictis grandidieri* | Endangered | | |
| Ethiopian genet (Abysinian genet) | *Genetta abyssinica* | *Genetta abyssinica* | *Genetta abyssinica* | Least Concern | | |
| Miombo genet (Angolan genet) | *Genetta angolensis* | *Genetta angolensis* | *Genetta angolensis* | Least Concern | | |
| Bourlon's genet | *Genetta bourloni* | *Genetta bourloni* | *Genetta bourloni* | Vulnerable | | |
| Crested genet (Crested servaline genet) | *Genetta cristata* | *Genetta cristata* | *Genetta cristata* | Vulnerable | | |
| Common genet | *Genetta genetta* | *Genetta genetta* | *Genetta genetta* | Least Concern | | |

**IUCN Red List of Threatened Species web site, www.redlist.org/ [Accessed 2019]

~ Convention on International Trade in Endangered species of Wild Fauna and Flora 2017. Available at: cites.org/eng/app/appendices.php [Accessed (2019)].

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+ U.S. Fish and Wildlife Website, Endangered and Threatened Species Listing. Web. 2019. http://www.fws.gov/endangered/

| Common Name | IUCN Taxa | ZIMS Taxa | Wilson Reeder | Red List | CITES | USFWS |
|---|---|---|---|---|---|---|
| Johnston's genet | *Genetta johnstoni* | *Genetta johnstoni* | *Genetta johnstoni* | Near Threatened | | |
| Large-spotted genet (Rusty-spotted genet) | *Genetta maculata* | *Genetta maculata* | *Genetta maculata* | Least Concern | | |
| Pardin genet (Forest genet) | *Genetta pardina* | *Genetta pardina* | *Genetta pardina* | Least Concern | | |
| Aquatic genet | *Genetta piscivora* | *Genetta piscivora* | *Genetta piscivora* | Near Threatened | | |
| King genet | *Genetta poensis* | *Genetta poensis* | *Genetta poensis* | Data Deficient | | |
| Servaline genet | *Genetta servalina* | *Genetta servalina* | *Genetta servalina* | Least Concern | | |
| Housa genet | *Genetta thierryi* | *Genetta thierryi* | *Genetta thierryi* | Least Concern | | |
| Cape genet | *Genetta tigrina* | *Genetta tigrina* | *Genetta tigrina* | Least Concern | | |
| Giant Forest genet (Giant genet) | *Genetta victoriae* | *Genetta victoriae* | *Genetta victoriae* | Least Concern | | |
| Somali dwarf mongoose (Dwarf mongoose) | *Helogale hirtula* | *Helogale hirtula* | *Helogale hirtula* | Least Concern | | |
| Banded palm civet | *Hemigalus derbyanus* | *Hemigalus derbyanus* | *Hemigalus derbyanus* | Near Threatened | Appendix II | |
| Small Indian mongoose | *Herpestes auropunctatus* | *Herpestes javanicus auropunctatus* | *Herpestes javanicus auropunctatus* | Least Concern | | |
| Short-tailed mongoose | *Herpestes brachyurus* | *Herpestes brachyurus* | *Herpestes brachyurus* | Near Threatened | | |
| Indian grey mongoose | *Herpestes edwardsii* | *Herpestes edwardsii* | *Herpestes edwardsii* | Least Concern | Appendix III | |
| Kaokoveld slender mongoose (Angolan slender mongoose) | *Herpestes flavescens* | *Galarella flavescens* | *Galarella flavescens* | Least Concern | | |
| Brown mongoose (Indian brown mongoose) | *Herpestes fuscus* | *Herpestes fuscus* | *Herpestes fuscus* | Least Concern | Appendix III | |
| Egyptian mongoose | *Herpestes ichneumon* | *Herpestes ichneumon* | *Herpestes ichneumon* | Least Concern | | |
| Javan mongoose | *Herpestes javanicus* | *Herpestes javanicus* | *Herpestes javanicus* | Least Concern | Appendix III | |
| Long-nosed mongoose | *Herpestes naso* | *Herpestes naso* | *Herpestes naso* | Least Concern | | |
| Somali slender mongoose | *Herpestes ochraceus* | *not listed* | *Galerella ochracea* | Least Concern | | |
| Cape grey mongoose | *Herpestes pulverulentus* | *Galarella pulverulentus* | *Galarella pulverulentus* | Least Concern | | |
| Common slender mongoose | *Herpestes sanguineus* | *Galarella sanguineus* | *Galarella sanguineus* | Least Concern | | |
| Collared mongoose | *Herpestes semitorquatus* | *Herpestes semitorquatus* | *Herpestes semitorquatus* | Near Threatened | | |

**IUCN Red List of Threatened Species web site, www.redlist.org/ [Accessed 2019]

~ Convention on International Trade in Endangered species of Wild Fauna and Flora 2017. Available at: cites.org/eng/app/appendices.php [Accessed (2019)].

* Don E. Wilson & DeeAnn M. Reeder (editors). 2005. *Mammal Species of the World. A Taxonomic and Geographic Reference (3rd ed)*, Web. 2019. https://www.departments.bucknell.edu/biology/resources/msw3/

+ U.S. Fish and Wildlife Website, Endangered and Threatened Species Listing. Web. 2019. http://www.fws.gov/endangered/

| Common Name | IUCN Taxa | ZIMS Taxa | Wilson Reeder | Red List | CITES | USFWS |
|---|---|---|---|---|---|---|
| Ruddy mongoose | *Herpestes smithii* | *Herpestes smithii* | *Herpestes smithii* | Least Concern | Appendix III | |
| Crab-eating mongoose | *Herpestes urva* | *Herpestes urva* | *Herpestes urva* | Least Concern | Appendix III | |
| Striped-necked mongoose | *Herpestes vitticollis* | *Herpestes vitticollis* | *Herpestes vitticollis* | Least Concern | Appendix III | |
| White-tailed mongoose | *Ichneumia albicauda* | *Ichneumia albicauda* | *Ichneumia albicauda* | Least Concern | | |
| Libyan striped weasel (Saharan striped weasel) | *Ictonyx libycus* | *Ictonyx libyca libyca* | *Ictonyx libyca* | Least Concern | | |
| Zorilla | *Ictonyx striatus* | *Ictonyx striatus* | *Ictonyx striatus* | Least Concern | | |
| Liberian mongoose | *Liberiictis kuhni* | *Liberiictis kuhni* | *Liberiictis kuhni* | Vulnerable | | |
| Marine otter | *Lontra felina* | *Lontra felina* | *Lontra felina* | Endangered | Appendix I | Endangered |
| Neotropical otter | *Lontra longicaudis* | *Lontra longicaudis* | *Lontra longicaudis* | Near Threatened | Appendix I | Endangered |
| Southern river otter | *Lontra provocax* | *Lontra provacax* | *Lutra provocax* | Endangered | Appendix I | Endangered |
| Eurasian otter | *Lutra lutra* | *Lutra lutra* | *Lutra lutra* | Near Threatened | Appendix I | |
| Hairy-nosed otter | *Lutra sumatrana* | *Lutra sumatrana* | *Lutra sumatrana* | Endangered | Appendix II | |
| Smooth-coated otter | *Lutrogale perspicillata* | *Lutrogale perspicillata* | *Lutrogale perspicillata* | Vulnerable | Appendix II | |
| Patagonian weasel | *Lyncodon patagonicus* | *Lyncodon patagonicus* | *Lyncodon patagonicus* | Least Concern | | |
| Sulawesi civet (Brown palm civet) | *Macrogalidia musschenbroekii* | *Macrogalidia musschenbroekii* | *Macrogalidia musschenbroekii* | Vulnerable | | |
| American marten | *Martes americana* | *Martes americana* | *Martes americana* | Least Concern | | NA |
| Yellow-throated marten | *Martes flavigula* | *Martes flavigula* | *Martes flavigula* | Least Concern | Appendix III (India) | Endangered |
| Beech marten | *Martes foina* | *Martes foina* | *Martes foina* | Least Concern | Appendix III (India) | |
| Nilgiri marten (Yellow-throated marten) | *Martes gwatkinsii* | *Martes gwatkinsi* | *Martes gwatkinsi* | Vulnerable | Appendix III (India) | |
| Pine marten | *Martes martes* | *Martes martes* | *Martes martes* | Least Concern | | |
| Japanese marten | *Martes melampus* | *Martes melampus* | *Martes melampus* | Least Concern | | |
| Sable | *Martes zibellina* | *Martes zibellina* | *Martes zibellina* | Least Concern | | |
| Japanese badger | *Meles anakuma* | *Meles anakuma* | *Meles anakuma* | Least Concern | | |
| Asian badger | *Meles leucurus* | *Meles leucurus* | *Meles leucurus* | Least Concern | | |
| Eurasian badger | *Meles meles* | *Meles meles* | *Meles meles* | Least Concern | | |
| Honey Badger | *Mellivora capensis* | *Mellivora capenses* | *Mellivora capensis* | Least Concern | Appendix III (Botswana) | |
| *Vietnamese ferret-badger* | *Melogale cucphuongensis* | *not listed* | *not listed* | Data Deficient | | |

**IUCN Red List of Threatened Species web site, www.redlist.org/ [Accessed 2019]

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* Don E. Wilson & DeeAnn M. Reeder (editors). 2005. *Mammal Species of the World. A Taxonomic and Geographic Reference (3rd ed)*, Web. 2019. https://www.departments.bucknell.edu/biology/resources/msw3/

+ U.S. Fish and Wildlife Website, Endangered and Threatened Species Listing. Web. 2019. http://www.fws.gov/endangered/

| Common Name | IUCN Taxa | ZIMS Taxa | Wilson Reeder | Red List | CITES | USFWS |
|---|---|---|---|---|---|---|
| Bornean ferret badger (Everett's ferret badger) | *Melogale everetti* | *Melogale everetti* | *Melogale everetti* | Endangered | | |
| Small-tooth ferret badger (Chinese ferret badger) | *Melogale moschata* | *Melogale moschata* | *Melogale moschata* | Least Concern | | |
| Javan ferret badger | *Melogale orientalis* | *Melogale orientalis* | *Melogale orientalis* | Least Concern | | |
| Large-tooth ferret badger (Burmese ferret badger) | *Melogale personata* | *Melogale personata* | *Melogale personata* | Least Concern | | |
| Hooded skunk | *Mephitis macroura* | *Mephitis macroura* | *Mephitis macroura* | Least Concern | | |
| Gambian mongoose | *Mungos gambianus* | *Mungos gambianus* | *Mungos gambianus* | Least Concern | | |
| Narrow-striped mongoose (Bokiboky) | *Mungotictis decemlineata* | *Mungotictis decemlineata* | *Mungotictis decemlineata* | Endangered | | |
| Amazon weasel | *Mustela africana* | *Mustela africana* | *Mustela africana* | Least Concern | | |
| Altia weasel (Mountain weasel) | *Mustela altaica* | *Mustela altaica* | *Mustela altaica* | Near Threatened | Appendix III (India) | |
| Stoat (Ermine) | *Mustela erminea* | *Mustela erminea* | *Mustela erminea* | Least Concern | Appendix III (India) | |
| Steppe polecat (European) | *Mustela eversmanii* | *Mustela eversmanii* | *Mustela eversmanii* | Least Concern | | |
| Columbian weasel | *Mustela felipei* | *Mustela felipei* | *Mustela felipei* | Vulnerable | | |
| Long-tailed weasel | *Mustela frenata* | *Mustela frenata* | *Mustela frenata* | Least Concern | | NA |
| Japanese weasel | *Mustela itatsi* | *Mustela itatsi* | *Mustela itatsi* | Near Threatened | | |
| Yellow-bellied weasel | *Mustela kathiah* | *Mustela kathiah* | *Mustela kathiah* | Least Concern | Appendix III (India) | |
| European mink | *Mustela lutreola* | *Mustela lutreola* | *Mustela lutreola* | Critically Endangered | | |
| Indonesian mountain weasel (Javan weasel) | *Mustela lutreolina* | *Mustela lutreolina* | *Mustela lutreolina* | Least Concern | | |
| Least weasel | *Mustela nivalis* | *Mustela nivalis* | *Mustela nivalis* | Least Concern | | |
| Malay weasel | *Mustela nudipes* | *Mustela nudipes* | *Mustela nudipes* | Least Concern | Appendix I | |
| Western polecat | *Mustela putorius* | *Mustela putorius furo* | *Mustela putorius* | Least Concern | | |
| Sichuan weasel | *Mustela russelliana* | *Mustela nivalis russelliana* | *Mustela nivalis russelliana* | Data Deficient | | |
| Siberian weasel | *Mustela sibirica* | *Mustela sibirica* | *Mustela sibirica* | Least Concern | Appendix III (India) | |

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~ Convention on International Trade in Endangered species of Wild Fauna and Flora 2017. Available at: cites.org/eng/app/appendices.php [Accessed (2019)].

* Don E. Wilson & DeeAnn M. Reeder (editors). 2005. *Mammal Species of the World. A Taxonomic and Geographic Reference (3rd ed)*, Web. 2019. https://www.departments.bucknell.edu/biology/resources/msw3/

+ U.S. Fish and Wildlife Website, Endangered and Threatened Species Listing. Web. 2019. http://www.fws.gov/endangered/

| Common Name | IUCN Taxa | ZIMS Taxa | Wilson Reeder | Red List | CITES | USFWS |
|---|---|---|---|---|---|---|
| Striped-backed weasel (Back-striped weasel) | *Mustela strigidorsa* | *Mustela strigidorsa* | *Mustela strigidorsa* | Least Concern | | |
| Egyptian weasel | *Mustela subpalmata* | *Mustela subpalmata* | *Mustela subpalmata* | Least Concern | | |
| Tonkin weasel | *Mustela tonkinensis* | *Mustela nivalis tonkinensis* | *Mustela nivalis tonkinensis* | Data Deficient | | |
| Sunda stink badger | *Mydaus javanensis* | *Mydaus javanensis* | *Mydaus javanensis* | Least Concern | | |
| Palawan stink badger | *Mydaus marchei* | *Mydaus marchei* | *Mydaus marchei* | Least Concern | | |
| African palm civet (Two-spotted palm civet) | *Nandinia binotata* | *Nandinia binotata* | *Nandinia binotata* | Least Concern | | |
| South American coati (Brown-nosed coati) | *Nasua nasua* | *Nasua nasua* | *Nasua nasua* | Least Concern | Appendix III (Uruguay) | |
| Eastern mountain coati | *Nasuella meridensis* | *Nasuella olivacea meridensis* | *Nasuella olivacea meridensis* | Endangered | | |
| Western mountain coati | *Nasuella olivacea* | *Nasuella olivacea* | *Nasuella olivacea* | Near Threatened | | |
| Sea mink | *Neovision macrodon* | *Neovision macrodon* | *Neovision macrodon* | Extinct | | |
| American mink | *Neovison vison* | *Neovison vison* | *Neovison vison* | Least Concern | | |
| Beddard's olingo | *not listed* | *Bassaricyon beddardi* | *Bassaricyon beddardi* | | | |
| Chiriqui olingo | *not listed* | *Bassaricyon pauli* | *Bassaricyon pauli* | | | |
| Harris' olingo | *not listed* | *Bassaricyon lasius* | *Bassaricyon lasius* | | | |
| Japanese otter | *not listed* | *Lutra nippon* | *Lutra nippon* | | Appendix I | Extinct in the wild |
| Masked palm civet | *Paguma larvata* | *Paguma larvata* | *Paguma larvata* | Least Concern | Appendix III (India) | |
| Selous's mongoose | *Paracynictis selousi* | *Paracynictis selousi* | *Paracynictis selousi* | Least Concern | | |
| Common palm civet | *Paradoxurus hermaphroditus* | *Paradoxurus hermaphroditus* | *Paradoxurus hermaphroditus* | Least Concern | Appendix III (India) | |
| Brown palm civet (Jerdon's Palm civet) | *Paradoxurus jerdonii* | *Paradoxurus jerdonii* | *Paradoxurus jerdonii* | Least Concern | Appendix III (India) | |
| Golden palm civet | *Paradoxurus zeylonensis* | *Paradoxurus zeylonensis* | *Paradoxurus zeylonensis* | Least Concern | | |
| African striped weasel (White-naped weasel) | *Poecilogale albinucha* | *Poecilogale albinucha* | *Poecilogale albinucha* | Least Concern | | |
| West African oyan (Langston's linsang) | *Poiana leightoni* | *Poiana leightoni* | *Poiana leightoni* | Vulnerable | | |
| Central African oyan (African linsang) | *Poiana richardsonii* | *Poiana richardsonii* | *Poiana richardsonii* | Least Concern | | |

**IUCN Red List of Threatened Species web site, www.redlist.org/ [Accessed 2019]

~ Convention on International Trade in Endangered species of Wild Fauna and Flora 2017. Available at: cites.org/eng/app/appendices.php [Accessed (2019)].

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+ U.S. Fish and Wildlife Website, Endangered and Threatened Species Listing. Web. 2019. http://www.fws.gov/endangered/

| Common Name | IUCN Taxa | ZIMS Taxa | Wilson Reeder | Red List | CITES | USFWS |
|---|---|---|---|---|---|---|
| Banded linsang | *Prionodon linsang* | *Prionodon linsang* | *Prionodon linsang* | Least Concern | Appendix II | |
| Spotted linsang | *Prionodon pardicolor* | *Prionodon pardicolor* | *Prionodon pardicolor* | Least Concern | Appendix I | Endangered |
| Crab-eating raccoon | *Procyon cancrivorous* | *Procyon cancrivorous* | *Procyon cancrivorous* | Least Concern | | |
| Northern raccoon | *Procyon lotor* | *Procyon lotor* | *Procyon lotor* | Least Concern | | |
| Pygmy raccoon (Cozumel Island raccoon) | *Procyon pygmaeus* | *Procyon pygmaeus* | *Procyon pygmaeus* | Critically endangered | | |
| Meller's mongoose | *Rhynchogale melleri* | *Rhynchogale melleri* | *Rhynchogale melleri* | Least Concern | | |
| Brown-tailed vontsira (Brown-tailed mongoose) | *Salanoia concolor* | *Salanoia concolor* | *Salanoia concolor* | Vulnerable | | |
| Southern spotted skunk (Spotted skunk) | *Spilogale angustifrons* | *Spilogale angustifrons* | *Spilogale angustifrons* | Least Concern | | |
| Western spotted skunk | *Spilogale gracilis* | *Spilogale gracilis* | *Spilogale gracilis* | Least Concern | | |
| Eastern spotted skunk (Spotted skunk) | *Spilogale putorius* | *Spilogale putorius* | *Spilogale putorius* | Vulnerable | | NA |
| Pygmy spotted skunk | *Spilogale pygmaea* | *Spilogale pygmaea* | *Spilogale pygmaea* | Vulnerable | | |
| American badger | *Taxidea taxus* | *Taxidea taxus* | *Taxidea taxus* | Least Concern | | |
| Malabar civet (Large spotted) | *Viverra civettina* | *Viverra civettina* | *Viverra civettina* | Critically endangered | Appendix III (India) | Endangered |
| Large-spotted civet | *Viverra megaspila* | *Viverra megaspila* | *Viverra megaspila* | Endangered | | |
| Malay civet | *Viverra tangalunga* | *Viverra tangalunga* | *Viverra tangalunga* | Least Concern | | |
| Large Indian civet | *Viverra zibetha* | *Viverra zibetha* | *Viverra zibetha* | Least Concern | Appendix III (India) | |
| Small Indian civet | *Viverricula indica* | *Viverricula indica* | *Viverricula indica* | Least Concern | Appendix III (India) | |
| Marbled polecat | *Vormela peregusna* | *Vormela peregusna* | *Vormela peregusna* | Vulnerable | | |

not listed in Wilson & Reeder
not listed on IUCN
not listed in ZIMS/ ISIS

Common names identified through IUCN, unless not identified within IUCN, then ZIMS
** IUCN does not differentiate the red pandast at the subspecies level
*New species- identified as new vietnamese ferret badger species, no specific name*

**IUCN Red List of Threatened Species web site, www.redlist.org/ [Accessed 2019]
~ Convention on International Trade in Endangered species of Wild Fauna and Flora 2017. Available at: cites.org/eng/app/appendices.php [Accessed (2019)].
* Don E. Wilson & DeeAnn M. Reeder (editors). 2005. *Mammal Species of the World. A Taxonomic and Geographic Reference (3rd ed)*, Web. 2019. https://www.departments.bucknell.edu/biology/resources/msw3/
+ U.S. Fish and Wildlife Website, Endangered and Threatened Species Listing. Web. 2019. http://www.fws.gov/endangered/

**Species Selected for Management**

TABLE 2: Applying Sustainability Criteria to Designate Animal Program Management Levels

| Criterion | Green SSP Program | Yellow SSP Program | Red Program | Candidate Program |
|---|---|---|---|---|
| Population size (Total N) | 50 and above | 50 and above | 20 - 49 | 19 and fewer |
| # AZA member institutions | 3 and above | 3 and above | 3 and above | 2 or fewer |
| Projected % GD at 100 years or 10 generations | 90.0% or above | Less than 90.0% | Less than 90.0% | NA |

**Program Management Categories**

The levels at which species are to be managed were selected by applying designations from Table 2. The summary can be found on the Animal Programs Summary table (Table 7), on the Individual Species Sheets, and are described below as written in the AZA TAG Handbook, Chapter 6: Regional Collection Plans (3).

Taxa must be assigned to one of the following four categories:

Green SSP Program
Yellow SSP Program
Red Program/ Candidate
Not Recommended for Management (NR)

Green SSP Programs

- Green SSP Programs have a population size equal to or greater than 50 individuals.
- This population is able to retain > 90.0% GD for 100+ years or 10+ generations.
- The population is presently sustainable demographically with a sufficiently large population size and a positive growth rate to reach 100 years or 10 generations.

Yellow SSP Program

- Yellow SSP Programs have a population size (total N at the time of population planning) equal to or greater than 50 individuals.
- The population is not able to retain at least 90.0% GD over for 100+ years or 10+ generations.
- The population may have never been formally planned, or was planned more than five years ago, so that the population sustainability score cannot be properly assessed.

Red SSP Programs

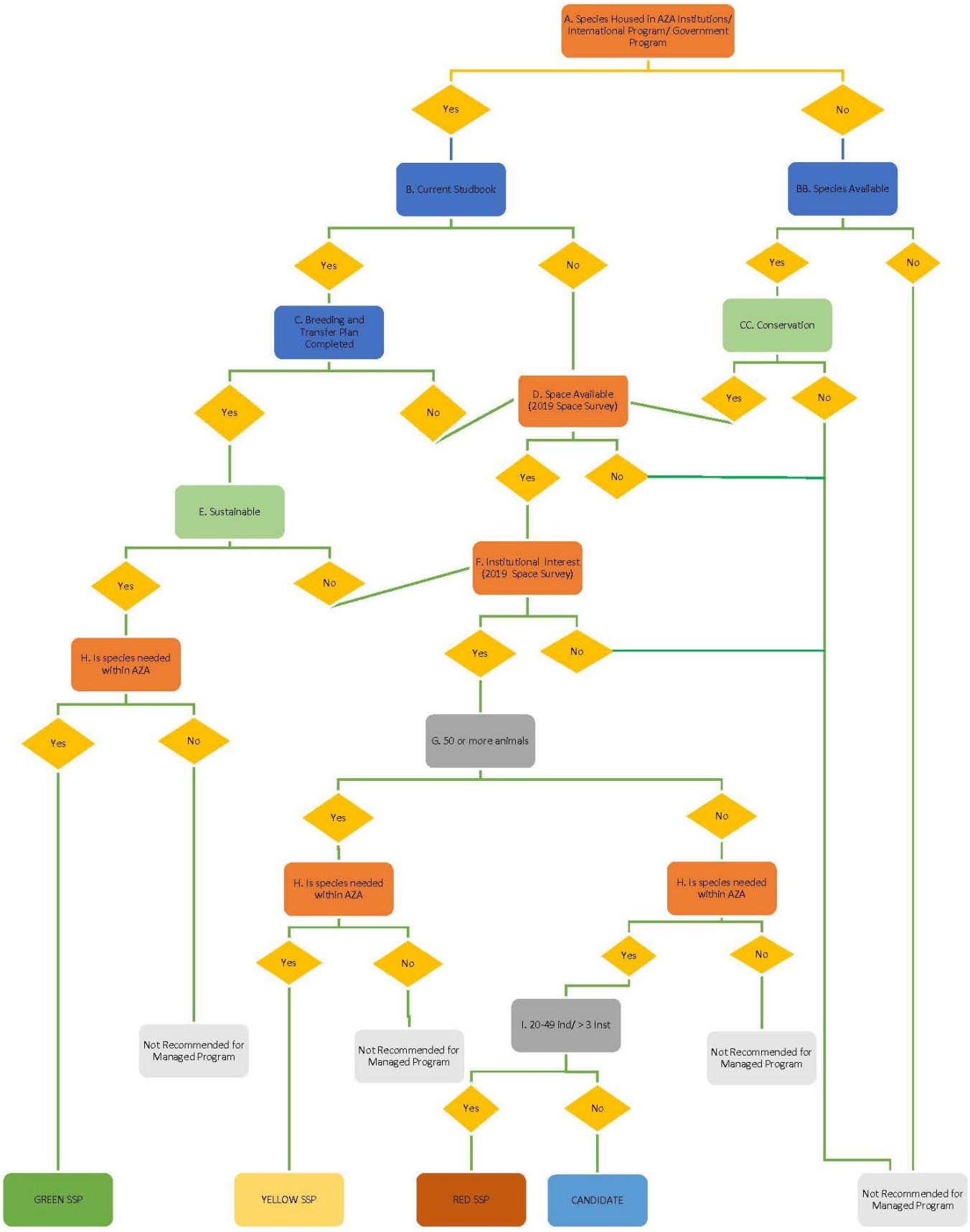
- Red SSP Programs have a population size between 20 and 49 individuals unless accepted models can demonstrate long-term sustainability, or the species is classified as Extinct in the Wild, Critically Endangered, or Endangered (e.g., IUCN or other government agency).

Candidate Programs

- Candidate Programs do not meet the minimum criteria to be an SSP Program.
    - Candidate Programs may have a population size fewer than 20 individuals, and/or
    - Candidate Programs may have a fewer than three participating AZA member institutions.
- Candidate Program populations may meet minimum SSP criteria, but are not designated as an SSP Program because they do not yet have a published AZA Regional Studbook.

3: Association of Zoos and Aquariums (2019). Taxon Advisory Group (TAG) Handbook. Association of Zoos and Aquariums, Silver Spring, MD..

TABLE 3: Decision Tree



**Small Carnivore TAG Decision Tree Process:**

**A**: Is the species housed in AZA Institutions/ Is there an International Program or is there a Government Program?
- If yes to any of the above, go to question **B**
- In no, go to question **BB**

**B:** Is there a current Studbook?
- If yes, go to question **C**
- If no, go to question **D**

**BB:** Is the species available in ZIMS or similar animal inventory programs?
- If yes, go to question **CC**
- If no – **Not Recommended**

**C:** Is there a current Breeding and Transfer Plan?
- If yes, go to question **E**
- If no, go to question **D**

**CC:** Is there a high Conservation need for the species based on IUCN or Governmental listing status?
- If yes, go to question **D**
- If no – **Not Recommended**

**D:** Is there space available according to 2019 Space Survey?
- If yes, go to question **F**
- If no – **Not Recommended**

**E:** Is the species sustainable by current AZA guidelines?
- If yes, go to question **H**
- If no – go to question **F**

**F:** Is there Institutional Interest according to 2019 Space Survey?
- If yes – go to question **G**
- If no – **Not Recommended**

**G:** 50 or more animals?
- If yes/no, go to question **H**

**H:** Is species needed within AZA?
- If yes- follow **Recommendation**
- Under G, If yes, Go to I
- If no – **Not Recommended**

**I:** Are there 20-49 indivduals in greater than 3 institutions?
- Follow **Recommendation**

**Species Selection Process:**

All managed species within the Small Carnivore TAG were put through the updated decision tree. The SCTAG Steering Committee made its species selection and determined the management needs for the species included in the RCP by using the Space Survey (Table 5), Decision Tree (Table 3), current Studbook and ZIMS data (Table 6) as well as the Steering Committee focus meeting held March 2018.

**Species Selection Criteria:**

The Steering Committee updated Decision Tree to fall in line with the AZA's new Animal Program Designation Management Levels and reflect this taxa's use of ambassador animals.

Criteria Definitions:

- Current Studbook: See Program Management Categories - published studbook within three years.
- Species Available: Species exists in ZIMS or similar animal inventory progam
- Breeding and Transfer Plan Completed: See Program Management Categories – published Breeding and Transfer Plan within three years.
- Conservation: High conservation need for the species based on IUCN or Governmental listing status and institutional interest in providing support.
- Space Available: According to 2019 Space Survey
- Sustainable: See Program Management Categories (Green, Yellow, Red/ Candidate)
- Species Needed: There is a desire by AZA institutions to hold the species, or there is a critical need to have the species under human care. Conversely, there is no need to manage this species in AZA institutions as it is very common in the pet trade, in nature, or other regions and no reason to hold it within AZA institutions.
- Institutional Interest: According to 2019 Space Survey
- Species status
  - Green SSP
  - Yellow SSP
  - Red Program
  - Candidate
  - Not Recommended For Managed Program (NR)

TABLE 4: Species Selection Criteria

| Common Name | AZA/ Int./ Govt. | Studbook | Species Available | Breeding & Transfer Plan | Conser-vation | Space Available | Sustain-able | Interest | 50 or More | Needed within AZA | 20-49 Ind/ >3 Inst | Management level |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Red panda (*Ailurus fulgens*) | Y | Y | | Y | | | Y | | | | | Green |
| Red panda (*Ailurus fulgens refulgens*) ** | Y | Y | | Y | | | Y | | | | | Green |
| North American river otter | Y | Y | | Y | | | Y | | | | | Green |
| Meerkat | Y | Y | | Y | | | Y | | | | | Green |
| Asian small-clawed otter | Y | Y | | Y | | | N | Y | Y | Y | | Yellow |
| Binturong | Y | Y | | Y | | | N | Y | Y | Y | | Yellow |
| Fossa | Y | Y | | Y | | | N | Y | Y | Y | | Yellow |
| Common dwarf mongoose | Y | Y | | Y | | | N | Y | Y | Y | | Yellow |
| Banded mongoose | Y | Y | | Y | | | N | Y | Y | Y | | Yellow |
| Black-footed ferret | Y | Y | | Y | | | N | Y | Y | Y | | Yellow |
| White-nosed coati | Y | Y | | Y | | | N | Y | Y | Y | | Yellow |
| Kinkajou | Y | Y | | Y | | | N | Y | Y | Y | | Yellow |
| Ringtail | Y | Y | | Y | | | N | Y | N | Y | | Red |
| Spotted-necked otter | Y | Y | | Y | | | N | Y | N | Y | | Red |
| Giant otter | Y | Y | | Y | | | N | Y | N | Y | | Red |
| Wolverine | Y | Y | | N | | Y | | Y | N | Y | N | Candidate |
| Fisher | Y | Y | | N | | Y | | Y | N | Y | N | Candidate |
| Striped skunk | Y | N | Y | | | Y | | Y | Y | | Y | Candidate |
| Tayra | Y | N | N | | | N | | | | | | NR |

Common names identified through IUCN, unless not identified within IUCN, then ZIMS

** IUCN does not differentiate red pandas at the subspecies level

No longer recommended

Y = yes

N = no

NR = Not Recommended

# Red Panda

*Ailurus fulgens fulgens; Ailurus fulgens refulgens*

*Picture by:* Patti Truesdell, Detroit Zoo

**SSP Coordinator:**
Sarah Glass, ZooKnoxville
sglass@knoxville-zoo.org

**Studbook Keeper:**
Mary Noell, Cincinnati Zoo & Botanical Garden
Mary.noell@cincinnatizoo.org

**Resources Available:**

| | |
|---|---|
| Breeding & Transfer Plan: | 21 Feb 2020 |
| Studbook: | 16 Jan 2018 |
| Animal Care Manual: | 2012 |

**Global Population Status:**

| | |
|---|---|
| EAZA | *Ailurus f.f.*: 169.210.0; *f.r.*:0.0 |
| PAAZAB | *Ailurus f.f.*: 2.3; *f.r.*: 0.0 |
| CZA/SEAZA/JAZA | *Ailurus f.f.*:25.22.0; *f.r.*: 127.150.0 |
| ARAZPA | *Ailurus f.f.*:32.21.3; *f.r.*:0.0 |

**Sustainability Criteria:**

*A.f. fulgens*:

| | |
|---|---|
| Current Population: | 75.62 (ZIMS) |
| | 101 (2019 Space Survey) |
| | 80.67 (Studbook) |
| Current Gene Diversity: | 93.76% |
| GD at 100 years: | 90.1% |
| Designation: | **Green SSP** |
| *Future Interest:* | *138 (2019 Space Survey)* |

*A.f.refulgens* :

| | |
|---|---|
| Current Population: | 36.40 (ISIS) |
| | 44 (2019 Space Survey) |
| | 40.43 (Studbook) |
| Current Gene Diversity: | 95.53% |
| GD at 100 years: | 89.5% |
| Designation: | **Green SSP** |
| *Future Interest:* | *51 (2019 Space Survey)* |

**Current Field Conservation Program:** Red Panda Network
**Field Contact & Email:** Ang Phuri Sherpa ang.sherpa@redpandanetwork.org
**North America Contact & Email:** Terrence Fleming terrance@redpandanetwork.org

**Program Goals (*A.f.fulgens*):**

1. Export 8-10 animals to South Africa as per the 2019 GSMP masterplan by 2022. 10 animals have been identified in the 2020 Regional masterplan. These animals are genetically valuable globally but over-represented regionally.
2. Increase the number of participating institutions by two facilities per year as per the 2019 GSMP masterplan. New facilities will be determined via networking through AZA conference and recommendations from current institutions. Expect 10 new facilities by 2025.
3. Increase genetic variation by importing 4 females from other regions that have been identified via the GSMP masterplan by 2024.
4. Work with PMC to identify potential inbreeding factors that might be affecting population and individual health. Plan to complete analysis by 2022. Communications with PMC advisor has been started.

**Program Goals (*A.f.refulgens*):**

1. Export 3 genetically valuable animals to South Korea as per the 2019 GSMP masterplan and their accreditation by AZA by 2022.
2. Continue to work with the GSMP to incorporate new regions into the managed population. South America has been identified by the GSMP as the management responsibility of the SSP. Animals have been identified to be imported to Chile from Japan by 2022.
3. Increase the number of participating institutions by one facility per year as per the 2019 GSMP masterplan. New facilities will be determined via networking through AZA conference and recommendations from current institutions. Expect 5 new facilities by 2025.

**Comments:** Red Pandas are and have been managed at the subspecific level. The SSP is now a GSMP. *Ailurus fulgens fulgens* remains a Green SSP. *Ailurus fulgens refulgens* changed from a Yellow SSP to a Green SSP.

# North America River Otter

*Lontra canadensis*

*Picture by:* Deanna Jackson

**SSP Coordinator:**
David Hamilton, Seneca Park Zoo
dhamilton@monroecounty.gov

**Studbook Keeper:**
David Hamilton, Seneca Park Zoo
dhamilton@monroecounty.gov

**Resources Available:**

| | |
|---|---|
| Breeding and Transfer Plan: | 09 Jan 2020 |
| Studbook: | 30 Nov 2019 |
| Animal Care Manual: | Oct 2009 |

**Global Population Status:**
Europe 5.6

**Sustainability Criteria:**

| | |
|---|---|
| Current Population: | 175.162.8 (ZIMS)<br>183 (2019 Space Survey)<br>151.122.1 (Studbook) |
| Current Gene Diversity: | 97.89% |
| GD at 100 years: | 93.9% |
| Designation: | **Green SSP** |
| *Future interest:* | *205 (2019 Space Survey)* |

**Advisors:**
Veterinary: Gwen Myers
Nutrition: Barbara Henry, Mike Maslanka
Reproduction: Candace Scarlata
Education: Rebecca Westover

**Current Field Conservation Program:** None
**Field Contact & Email:** David Hamilton, dhamilton@monroecounty.gov
**North America Contact & Email:** David Hamilton, dhamilton@monroecounty.gov

## Program Goals

**1.** Complete genetic study looking at subspecies role in breeding issue. Publish results by December 2021.
**Action:** Work with Dr. Larry Buckley of Rochester Institute of Technology to complete the North American river otter genetic study. Recruit more institutional participants, finish DNA extractions, analyze the results, write and submit a manuscript for publishing by the end of 2021.

**2.** Hold and conduct the ninth Otter Keeper Workshop in 2021 or by fall 2022.
**Action:** Normally this workshop is held biennially. It was to be held at ZooMiami in October 2020, however, due to the aftermath of COVID-19, it was postponed. Reschedule the postponed 2020 workshop. Hold at ZooMiami if feasible or confirm a new location.

**3**. Assist the newly recruited Education Advisor to get up to speed and connect her with the existing Education Advisors for the other otter species.
**Action**: Facilitate the new Education Advisor's success by connecting her with the other Program Leaders and their Education Advisors and/or help them to recruit new Education Advisors. Suggest that they hold monthly online meetings and develop new materials for distribution to the IRs.

**Comments:**
The demand for North America River Otters is continuously higher than the number of otters available for placement. The SSP is stressing the importance of increasing the number of zoo births produced per year in order to reduce the population's reliance on wild-origin rehab and nuisance animals for demographic stability.

# Meerkat

*Suricata suricatta*

*Picture by:* Amy Hawley

**SSP Coordinator:**
Katie Kimble, Sedgwick County Zoo
Katie.kimble@scz.org

**Studbook Keeper:**
Katie Kimble, Sedgwick County Zoo
Katie.kimble@scz.org

**Resources Available:**

| | |
|---|---|
| Breeding and Transfer Plan: | 20 Feb 2020 |
| Studbook: | 28 April 2019 |
| Animal Care Manual: | Oct 2011 |

**Global Population Status:**

| | |
|---|---|
| Europe | 1142.898.375 |
| South Africa | 14.19.34 |
| Asia | 137.113.103 |
| ARAZPA | 122.81.25 |

**Sustainability Criteria:**

| | |
|---|---|
| Current Population: | 292.208.11 (511) (2019 studbook) |
| | 233.160.7 (400) (AZA only – 2020 SSP Masterplan) |
| | 248 (2019 Space Survey) |
| Current Gene Diversity: | 96.46 (AZA only – 2020 SSP Masterplan) |
| GD at 100 years: | 89.1 (AZA only – 2020 SSP Masterplan) |
| Designation: | **Green SSP** |
| *Future Interest:* | *358 (2019 Space Survey)* |

**Current Field Conservation Program:** None
**Field Contact & Email:**
**North America Contact & Email:**

## Program Goals

**1.** Improve reproductive management at the institutional level that will allow each facility to safely and effectively discontinue reproduction in their group once institution carrying capacity and/or breeding recommendations are met.
**Action:** Provide contraception protocols, as recommended by the Reproductive Management Center to each facility with breeding recommendations by the end of 2020.

**2.** Facilitate a husbandry and management workshop for meerkat and mongoose species.
**Action:** With institutional support and in conjunction with dwarf and banded mongoose SSP coordinators, plan a husbandry and management workshop to take place at an AZA mid-year meeting by 2022.

**3.** Update ACM information
**Action:** With the assistance of the Meerkat SSP management group, update all meerkat portions of the Meerkat, Mongoose, Fossa ACM with the potential of creating a Meerkat specific ACM pending approval of the SCTAG by December 2022.

**Comments:** This program changed from a Yellow SSP to a Green SSP since the last RCP.

# Asian Small Clawed Otter

*Aonyx cinereus*

*Picture by:* National Zoo

**SSP Coordinator/Studbook Keeper**
Sarah Duncan, Tulsa Zoo
ASCotterstudbook@hotmail.com

**SSP Vice Coordinator**
Tallie Wiles, National Zoo
wilest@si.edu

| **Resources Available:** | | **Global Population Status:** | |
|---|---|---|---|
| Breeding and Transfer Plan: | 23 Sept 2020 | Europe | 432.437.73 |
| Studbook: | 15 May 2017 | JAZA | 124.127.3 |
| Animal Care Manual: | Oct 2009 | ARAZPA | 35.23.3 |

**Sustainability Criteria:**

| | |
|---|---|
| Current Population: | 70.57.9 (ZIMS)<br>77 (2019 Space Survey)<br>100.90.1 (Studbook) |
| Current Gene Diversity: | 93.1% |
| GD at 100 years: | 62.8% |
| Designation: | **Yellow SSP** |
| *Future Interest:* | *95 (2019 Space Survey)* |

**Current Field Conservation Program:** SSP endorses Coordinator, Otter Specialist Group/ IUCN - Asia
**Field Contact & Email:** Padma de Silva, padmadesilva@gmail.com
**North America Contact & Email:** Sarah Duncan, ASCotterstudbook@hotmail.com

## Program Goals

**1.** Increase genetic diversity through importation of new genetics from other regions. (timeline: 3-5 years).
**Action**: Work with the PMC and studbook analyst to set parameters of age, goal for number of importations, number of facilities required for this, and other factors for importing otters from other regions to increase genetic diversity (14 months).

a) Identify and obtain commitment from the determined number of facilities for importation of otters. (6 months post establishment of parameters). Identify the otters from other regions to import and begin that process (3-5 years from start of process).

**2.** Lifetime Reproductive Planning (timeline: 18-24 months)
**Action**: Assist RMC in completing the Reproductive Viability Analysis (12 months)

a) Use information form the RVA to develop the criteria utilized for individual otter LRP(8 months)

**3.** Improve reproductive success in below average size litters (timeline: 18 months)
**Action**: Update analysis of litter size survival rates to include 2014-2019 litters (6 months)

a) Gather 1st month pup weights from last ~15 years (6 months)
b) Create guidelines/protocol for early decision making regarding intervention with pups(6 months)

# Binturong

*Arctictis binturong*

*Picture by:* Corrie Ignagni, Roger Williams Park Zoo

**SSP Coordinator:**
Anne Nichols, Chicago Zoological Society/ Brookfield Zoo
anne.nichols@czs.org

**Studbook Keeper:**
Anne Nichols, Chicago Zoological Society/ Brookfield Zoo
anne.nichols@czs.org

**Vet Advisor:**
Jimmy Johnson, Saint Louis Zoo
johnson.4013@gmail.com; jjohnson@stlzoo.org

**Resources Available:**

| | |
|---|---|
| Breeding and Transfer Plan: | 20 Jun 2019 |
| Studbook: | 23 Apr 2019 |
| Animal Care Manual: | Jan 2010 |

**Global Population Status:**

| | |
|---|---|
| Europe | 64.72.13 |
| Asia | 86.93.16 |
| Australia | 8.3 |

**Sustainability Criteria:**

| | |
|---|---|
| Current Population: | 42.36.3 (ZIMS, North America)<br>29 (2019 Space Survey)<br>33.34 (Studbook)<br>75 Target Population (2018 SCTAG Report) |
| Current Gene Diversity: | 8% known; 41.6% known for breeding population with assumptions |
| GD at 100 years: | Unknown |
| Designation: | **Yellow SSP** |
| *Future Interest:* | *47 (2019 Space Survey)* |

**Current Field Conservation Program:** None
**Field Contact & Email:**
**North America Contact & Email:**

**Program Goals**

1. Work with Veterinary Advisor to create reproductive assessment for unsuccessful breeding pairs by December 2020. Add an Education Advisor to aide in developing a plan to support the need for Ambassador animals by March 2021.
2. Work with Veterinary Advisor to develop a genetic analysis project to increase known pedigree in breeding population by June 2021.
3. Update/create binturong only Animal Care Manual by December 2021.
4. Work with Population Biologist to determine long term population viability by May 2021

**Comments:**

Changed from a Red Program to a Yellow Program. There are challenges facing this taxon. There is a high genetic unknownness in the population. Over 50% of the population are Ambassador animals, which is very challenging when attempting to make breeding recommendations. Need to understand the role of Ambassador animals in this population.

# Fossa

*Cryptoprocta ferox*

*Picture by:* Jessica Hoffman, Greensboro Science Center

**SSP Coordinator:**
Mandi Krebs, Omaha's Henry Doorly Zoo
fossa@omahazoo.com

**Studbook Keeper:**
Mandi Krebs, Omaha's Henry Doorly Zoo
fossa@omahazoo.com

**Vet Advisor:**
Sarrah Kaye, Staten Island Zoo
skaye@statenislandzoo.org

**Resources Available:**

| | |
|---|---|
| Breeding and Transfer Plan: | 23 Jul 2018 |
| Studbook: | 21 Mar 2018 |
| Animal Care Manual: | Oct 2011 |

**Global Population Status:**

| | |
|---|---|
| Europe | 29.21.3 |

**Sustainability Criteria:**

| | |
|---|---|
| Current Population: | 34.28 (ZIMS for Studbooks)<br>27 (2019 Space Survey)<br>35.28 (2018 Studbook) |
| Current Gene Diversity: | 94% |
| GD at 100 years: | 64% |
| Designation: | **Yellow SSP** |
| *Future Interest:* | *35 (2019 Space Survey)* |

**Current Field Conservation Program:** No designated program working with the SSP
**Field Contact & Email:**
**North America Contact & Email:** Mandi Krebs, fossa@omahazoo.com

**Program Goals**

1. Task vet advisor with exploring causes and potential treatment for seasonal hair loss in female fossa by annual conference of 2020.
2. Identify Yellow SSP Steering Committee positions that are needed before mid-year conference of 2021.
3. Update and share list of bibliography references by Mid-Year Conference of 2021.

**Comments:**
This is the only species under the TAG from Madagascar. There is an active EEP population. Have started working closer with the EEP for genetic and demographic analysis and variability.

# Dwarf Mongoose

*Helogale parvula*

*Picture by:* Stephanie Richmond, Saint Louis Zoo

**SSP Coordinator:**
Stephanie Richmond, Saint Louis Zoo
richmond@stlzoo.org

**SSP Vice Coordinator:**
Melissa Medlen, Dallas Zoo
Melissa.Medlen@dallaszoo.com

**Studbook Keeper:**
Stephanie Richmond, Saint Louis Zoo
richmond@stlzoo.org

**Resources Available:**

| | |
|---|---|
| Breeding and Transfer Plan: | 05 Jan 18 |
| Studbook: | 28 May 19 |
| Animal Care Manual: | Oct 2011 |

**Global Population Status:**

| | |
|---|---|
| Europe | 149.129.47 |
| Asia | 8.9.4 |

**Sustainability Criteria:**

| | |
|---|---|
| Current Population: | 49.35.4 (ZIMS)<br>52 (2019 Space Survey)<br>58.39.2 (Studbook) |
| Current Gene Diversity: | 92.02% |
| GD at 100 years: | 34.62% |
| Designation: | **Yellow SSP** |
| *Future Interest:* | *65 (2019 Space Survey)* |

**Current Field Conservation Program:** None
**Field Contact & Email:**
**North America Contact & Email:**

**Program Goals**

1. Establish and maintain 14 holding or breeding facilities by 2024.
2. Update Animal Care Manual to include new parameters for introductions in breeding and non-breeding groups by 2023.
3. Review data collected from at least one institution regarding reproduction suppression by 2022.

**Comments:**
The main challenge of this program currently is the loss of institutions as facilities move towards themed habitats.

# Banded Mongoose

*Mungos mungo*


**SSP Coordinator:**
Nora Beirne, Central Park Zoo
nbeirne@wcs.org

**Studbook Keeper:**
Nora Beirne, Central Park Zoo
nbeirne@wcs.org

**Resources Available:**

| | |
|---|---|
| Breeding and Transfer Plan: | 14 Feb 2017 |
| Studbook: | 15 Aug 2016 |
| Animal Care Manual: | Oct 2011 |

**Global Population Status:**

| | |
|---|---|
| Europe | 198.246.42 |
| South Africa | 6.6.0 |
| Asia | 33.16.5 |

**Sustainability Criteria:**

| | |
|---|---|
| Current Population: | 22.16 (ZIMS) |
| | 38 (2019 Space Survey) |
| | 35.31 (Studbook) |
| Current Gene Diversity: | 85.19 |
| GD at 100 years: | 43.7% |
| Designation: | **Yellow SSP** |
| *Future Interest:* | *44 (2019 Space Survey)* |

**Current Field Conservation Program:** None
**Field Contact & Email:**
**North America Contact & Email:**

**Program Goals**

1. With the assistance of AZA networking tools, identify two new facilities to participate in the program (12 months) and obtain a commitment to accept animals by December of 2021.
2. Increase genetic diversity of captive population through importation and exportation to and from from EEP in the next 4-5 years. Work with the PMC and studbook analyst to set parameters for importation desires of new individuals (18 months). Coordinate with AZA and EAZA to identify facilities capable of accepting or exporting individuals within established parameters (12 months post establishment). Begin moving identified individuals.

**Comments:**
There is a large EEP population. Will explore cooperation between EAZA and AZA. Similar needs and requirements as meerkats. Considered Injurious Wildlife and proper permit application applies.

# Black-footed Ferret

*Mustela nigripes*

*Picture by:* Della Garelle

**SSP Co-Coordinators:**
Paul Marinari, SCBI, marinarip@si.edu

**Vice Coordinator:**
Rachel M. Santymire, M.S., Ph.D**,** Georgia State University
rsantymire@gsu.edu

**Studbook Keeper:**
Paul Marinari, Smithsonian's Conservation Biology Institute
marinarip@si.edu

**Advisors**:
Veterinary Advisor: Dr. Della Garelle, USFWS
Reproduction Advisor: Dr. Rachel Santymire, Georgia State University
Population Advisor: Colleen Lynch, Riverbanks Zoo

**Resources Available:**

| | |
|---|---|
| Breeding and Transfer Plan: | 30 Oct 2019 |
| Studbook: | 21 Aug 2019 |
| Animal Care Manual: | 2018 |

**Global Population Status:**
Europe: 0

**Sustainability Criteria:**

| | |
|---|---|
| Current Population: | 89.103.29 (ZIMS)<br>248 (2019 Space Survey)<br>307 (132.175) Studbook |
| Current Gene Diversity: | 85.43% |
| GD at 100 years: | 59% |
| Designation: | **Yellow SSP** |
| *Future Interest:* | *238 (2019 Space Survey)* |

**Current Field Conservation Program:** Ongoing with reintroduction in USA, prior reintroductions in MEX, CAN, but inactive (USFWS)
**Field Contact & Email:** Robyn Bortner, robyn_bortner@fws.gov
**North America Contact & Email:** Paul Marinari, marinarip@si.edu

**Program Goals**

1. Pair all females thru natural breeding and incorporate up to 5 females bred by AI (fresh) using MSI and investigate ways to increase reproductive success (September 2021).
2. Continue working with field partners
3. Increase use of Vitamin E diet supplementation and assess semen quality (ongoing)
4. Continue diet study and assess reproductive parameters (August 2020)
5. Expand partnership with EAZA, notably the European mink program

**Comments:**
Release program coordinated through USFWS.

# White-nosed Coatimundi

*Nasua narica*

*Picture by:* Elliot Zirulnik

**SSP Coordinator:**
Lauren Hinson, Brevard Zoo
Lhinson@brevardzoo.org

**Studbook Keeper:**
Lauren Hinson, Brevard Zoo
Lhinson@brevardzoo.org

| **Resources Available:** | | **Global Population Status:** | |
|---|---|---|---|
| Breeding and Transfer Plan: | 10 Oct 2018 | Europe | 15.12.5 |
| Studbook: | 10 Oct 2018 | Asia | 0.1 |
| Animal Care Manual: | May 2010 | | |

**Sustainability Criteria:**

| | |
|---|---|
| Current Population: | 38.53 ZIMS<br>49 (2019 Space Survey)<br>52 (20.32) (With Exclusions, Studbook) |
| Current Gene Diversity: | 97.74% |
| GD at 100 years: | 18.8 |
| Designation: | **Yellow SSP** |
| *Future Interest:* | *64 (2019 Space Survey)* |

**Current Field Conservation Program:** None
**Field Contact & Email:**
**North America Contact & Email:**

**Program Goals**

1. Use the PMC recommendations in the current Breeding & Transfer Plan to provide new breeding opportunities for white nosed coatis with the goal of getting at least two recommended pairs to successfully produce litters before the end of 2021.
2. To achieve target populations enlist at least one institution to import a pair of non-related, breeding age white nosed coati from South America by the end of 2021 for the purpose of breeding and producing a litter by 2022.
3. With management group consensus, set participation criteria and enlist at least two institutions to obtain pairs of non-related individuals for the purpose of breeding from reputable breeders or other non-AZA sustainability partners by the end of 2021

**Comments:**
Requesting institutions consider importing from South America and bring in from private for breeding. There is interest in this species, however due to an aging breeding population and sterilization of males, the availability of this species is low.

# Kinkajou

*Potos flavus*

*Picture by:* Amanda Stine

**SSP Coordinator:**
Liz Toth, Boonshoft Museum of Discovery
ltoth@boonshoftmuseum.org

**Studbook Keeper:**
Liz Toth, Boonshoft Museum of Discovery
ltoth@boonshoftmuseum.org

**Resources Available:**

| | |
|---|---|
| Breeding and Transfer Plan: | 18 July 2018 |
| Studbook: | 05 Aug 2020 |
| Animal Care Manual: | May 2010 |

**Global Population Status:**

| | |
|---|---|
| Europe: | 26.26 |
| Asia: | 20.22 |

**Sustainability Criteria:**

| | |
|---|---|
| Current Population: | 34.36 (AZA ZIMS)<br>42 (2019 Space Survey)<br>40.50.1 (Studbook) |
| Current Gene Diversity: | Unknown; 38.8% known |
| GD at 100 years: | Unknown |
| Designation: | **Yellow SSP** |
| *Future Interest:* | *25 (2019 Space Survey)* |

**Current Field Conservation Program:** None
**Field Contact & Email:**
**North America Contact & Email:**

**Program Goals**

1. **AAG Development**. Successful completion of the AAG for Kinkajou to be incorporated in ACM by June 2022
   a) Final version of AAG around May 2022
   b) Address first accountability deadline of 18 months and see if an extension is needed
   c) Behavioral advisors will be included in AAG committee to help produce AAG document. Committee will consist of a minimum of three members.
   d) Discuss options with RMC and Vet advisors on how to manage aggression and how it ties into education use and challenges on pairing attempts - by Jan 2021
2. **Produce 1 – 2 pups in the next 3 years** by May 2022
   a) Meant to gain husbandry experience and knowledge on how to best breed them as breeding knowledge and expertise has diminished in recent years.
   b) Contact RMC/TAG Vet advisors to discuss challenges to breeding. Product will be a formal small report from RMC on contraception used in the species and summary of solutions discussed. Behavioral advisors to help with a plan to improve breeding as well.

**Comments:**

The SSP does not recommend these animals as Ambassador Animals unless there are experienced handlers. Currently working with EAZA for a better understanding of this population. Do not spay or neuter kinkajous without contacting the SSP Coordinator.

# Ringtail

*Bassariscus astutus*

**SSP Coordinator:**
Debbie Thompson, Little Rock Zoo
dthompson@littlerock.gov

**Studbook Keeper:**
Debbie Thompson, Little Rock Zoo
dthompson@littlerock.gov

*Picture by:* Debbie Thompson, Little Rock Zoo

**Resources Available:**

| | |
|---|---|
| Breeding and Transfer Plan: | 24 Mar 2020 |
| Studbook: | 29 Dec 2020 |
| Animal Care Manual: | May 2010 |

**Global Population Status:**

| | |
|---|---|
| Europe | 3.3 |
| Asia | 1.1.1 |

**Sustainability Criteria:**

| | |
|---|---|
| Current Population: | 24.31.5 (ZIMS)<br>33 (2019 Space Survey)<br>21.31 (2019 Studbook data) |
| Current Gene Diversity: | 92.2 |
| GD at 100 years: | 56.7 |
| Designation: | **Red SSP** |
| *Future Interest:* | *40 (2019 Space Survey)* |

**Current Field Conservation Program:** Ringtail (*Bassariscus astutus*) Research in the Central Valley, California. Home ranges, den sites and food habit of ringtail in the Sutter Buttes, California

**Field Contact & Email:** David Wyatt dwyatt@me.com
**North America Contact & Email:** David Wyatt dwyatt@me.com

**Program Goals**

1. Recruit one new institution in 2021 and one new institution in 2022 to create space to return the population to yellow from red.
2. Get one institution to send a keeper to California in 2021 to go into the field with our Conservation partner, David Wyatt, to learn more about the species.
3. Compile birth protocols from at least 3 institutions in 2020 to share with new breeding facilities to increase kit survival.

**Comments:**
Population close to 50 so it fluctuates between red and yellow. A few animals have been sent to the EAZA population in the past few years.

# Spotted-necked Otter

*Hydrictis maculicollis*

*Picture by:* Dane Jorgensen

**SSP Coordinator:**
Teresa Shepard, Omaha's Henry Doorly Zoo and Aquarium
jungle@omahazoo.com

**Studbook Keeper:**
Teresa Shepard, Omaha's Henry Doorly Zoo and Aquarium
jungle@omahazoo.com

**Resources Available:**

| | |
|---|---|
| Breeding and Transfer Plan: | 5 Sept 2019 |
| Studbook: | 1 Mar 2019 |
| Animal Care Manual: | Oct 2009 |

**Global Population Status:**

| | |
|---|---|
| Europe | 2.1 |
| Africa | 0.1 |

**Sustainability Criteria:**

| | |
|---|---|
| Current Population: | 9.13.1<br>14 (2019 Space Survey) |
| Current Gene Diversity: | 87.33% |
| GD at 100 years: | 36.5% |
| Designation: | **Red SSP** |
| *Future Interest:* | *23 (2019 Space Survey)* |

**Program Goals**

1. Provide new partner and breeding opportunities for five pairs of otters with the goal of at least one offspring produced by July 2021.
2. Increase the number of participating institutions by at least one facility by December 2021.
3. Explore with the ARC the use of exogenous hormones to facilitate an increase in ovulation for female otters that have previously had a birth control implant by January 2021.

**Comments:**
There is a conservation need as IUCN Red List status is Near Threatened. There is a potential for a mixed species exhibit, however, Red Program managers need to increase space in AZA institutions.

# Giant Otter

*Pteronura brasiliensis*

*Picture by:* Calli Zoo

**SSP Coordinator:**
Candace Sclimente, Los Angeles Zoo
Candace.sclimenti@lacity.org

**Studbook Keeper:**
Stephanie Eller, Philadelphia Zoo
Eller.stephanie@phillyzoo.org

**Resources Available:**

| | |
|---|---|
| Breeding and Transfer Plan: | 29 July 2020 |
| Studbook: | 08 Jan 2020 |
| Animal Care Manual: | Oct 2009 |

**Global Population Status:**

| | |
|---|---|
| Europe | 34.21.5 |
| S. America | 7.6 |
| Asia | 2.3 |

**Sustainability Criteria:**

| | |
|---|---|
| Current Population: | 8.10.1 (ZIMS)<br>12 (2019 Space Survey)<br>18.19 (Studbook) |
| Current Gene Diversity: | 77.92% |
| GD at 100 years: | 53.5% |
| Designation: | **Red SSP** |
| *Future Interest:* | *23 (2019 Space Survey)* |

**Current Field Conservation Program:** Will be determined by new SSP Coordinator
**Field Contact & Email:**
**North America Contact & Email:**

**Program Goals**

1. Breeding: The current Giant Otter SSP population includes 38 individuals (18 males, 20 females, 0 unknown) held by 11 AZA institutions (35 in North America and 3 in South America). To achieve the target population of 55 individuals set by the Small Carnivore Taxon Advisory in 2019, breeding and successful rearing will need to be achieved. Using the PMC recommendations in the soon-to-be-published 2020 Breeding & Transfer Plan, provides breeding opportunities for three pairs; with each female producing one litter over the next two years.
2. Expand the program with additional zoos housing giant otters: With management group consensus, identify and solicit additional zoos to house giant otters and join the program. As holding space continues to be a challenge for managing this species, more zoos are needed within the program. As identified in the 2020 Breeding & Transfer Plan, six transfer opportunities have been identified to meet institutional needs and alleviate overcrowding. With the goal of adding one new facility per year, beginning in 2022 and over the following two years, this program will be able to continue to grow, meeting breeding requirements while providing sustainable management solutions to institutions holding more than one group of otters.
3. Import from founding countries: With management group consensus, set participation criteria and identify animals from our Colombian and Brazilian partners for importation of one – three new founder animals over the next three years. By importing and breeding new founders, we will improve the long-term genetic viability of the population by 2024.

# Wolverine

*Gulo gulo*

**SSP Coordinator:**
Laurie Trechsel, Minnesota Zoo
Laurie.Trechsel@state.mn.us

**Studbook Keeper:**
Laurie Trechsel, Minnesota Zoo
Laurie.Trechsel@state.mn.us

*Picture by:* Adam Keniger

**Resources Available:**

| | |
|---|---|
| Breeding and Transfer Plan: | 2 Sept 2009 |
| Studbook: | 15 Dec 2013 |
| Animal Care Manual: | Jan 2010 |

**Global Population Status:**

| | | |
|---|---|---|
| Europe | Gulo gulo gulo | 53.50.2 |
| Europe | Gulo gulo | 5.7 |
| Asia | Gulo gulo | 1.0 |

**Sustainability Criteria:**

| | | |
|---|---|---|
| Current Population: | Gulo gulo | 4.3 (ZIMS) in 5 institutions |
| | Gulo gulo gulo | 7.7 (ZIMS) in 6 institutions |
| | | 8 (2019 Space Survey) |
| | | 9.8 (Studbook) in 9 institutions |

Current Gene Diversity:
GD at 100 years:
Designation: **Candidate Program**
*Future Interest:* *20 (2019 Space Survey)*

**Current Field Conservation Program:** In progress
**Field Contact & Email:**
**North America Contact & Email:**

**Program Goals**

**1.** Work with EEP on husbandry and improved reproductive success in AZA/ Ongoing
**2.** Increase target population size & Founders/ Work with State Fish & Game & EEP/ 2019
**3.** Improve reproductive success from the EEP wolverines currently in North America

**Comments:**
Changed from a Red SSP to a Candidate Program. There are challenges with this population. Birth rate has declined by 8% in 10 years. There is a 40% mortality in the 1st year. There is a large EEP population but is managed at the subspecies level. Partnering with EEP to import and possibly phase out North American population over time. Initial research on reproduction is being conducted.

# Fisher

*Martes pennanti*

*Picture by:* Animal Picture Society

**Studbook Keeper:**
Vacant

| **Resources Available** | | **Global Population** |
|---|---|---|
| **Status:** | | |
| SSP Masterplan: | N/A | Europe 0 |
| Studbook: | N/A | |
| Animal Care Manual: | Jan 2010 | |

**Sustainability Criteria:**

| | |
|---|---|
| Current Population: | 4.3 (ZIMS) |
| | 3 (2019 Space Survey) |
| Current Gene Diversity: | N/A |
| GD at 100 years: | N/A |
| Designation: | **Candidate Program** |
| *Future Interest:* | *17 (2019 Space Survey)* |

**Current Field Conservation Program:** N/A
**Field Contact & Email:**
**North America Contact & Email:**

**Program Goals**
**1.** None at this time

**Comments:**
Not recommended for management in 2014. Interest has increased moving this into the Candidate program for the 2019 RCP. New program leader will added soon.

# Striped Skunk

*Mephitis mephitis*

*Picture by:* @magickelly, inaturalist.org

**Point Person:**
Amanda Ista, Milwaukee Zoo
amandaista@hotmail.com

**Resources Available**

| | |
|---|---|
| SSP Masterplan: | N/A |
| Studbook: | N/A |
| Animal Care Manual: | Jan 2010 |

**Global Population Status:**

| | |
|---|---|
| Europe | 59.81.35 |
| Asia | 14.12 |

**Sustainability Criteria:**

Current Population: 77.68.5 (ZIMS)
33 (2019 Space Survey)

Current Gene Diversity: N/A
GD at 100 years: N/A
Designation: **Candidate Program**
*Future Interest: 29 (2019 Space Survey)*

**Current Field Conservation Program:** N/A
**Field Contact & Email:**
**North America Contact & Email:**

**Program Goals**

**1.** None at this time

**Comments:**

Not recommended for management in 2014. Interest has increased moving this into the Candidate program for the 2019 RCP.

**Space Analysis**

A space assessment survey was conducted and completed by Jennifer Compston, TAG Secretary and Nadya Bennet of the Columbus Zoo and Aquarium in 2019. A space survey was distributed electronically to 233 AZA accredited institutions and related facilities. The responses from this survey were analyzed to determine the amount of space that is currently available and that will be available in the future to manage small carnivores. 160 AZA institutions responded to the survey. Of the 150 AZA institutions that have Small Carnivores, 124 responded; which represents 82% of those surveyed.
Results indicated that in 2019 there were 1,469 spaces being occupied by managed Small Carnivores in AZA institutions. Within the next 3-5 years the survey results indicated that maximum capacity would increase within AZA institutions to 1,685 spaces (increase of 216 spaces). Results from the 2019 Space Survey can be found in the Space Survey Summary (Table 5).
During the TAG's next planning meeting the discrepancies between current anmals and future needs from the Space Survey will be assessed. While the numbers from the Space Survey do not always match the Programs' goals (Table 5, Table 7), it seems to be due to the variablilty in responses from the Space Surveys. The TAG will work closely with the Programs to right-size the target population numbers so that they have achievable goals.

TABLE 5: Space Survey Summary

| Managed Species | Number Animal Now | Display Now | Holding Now | Space Now | Number Animal Future | Display Future | Holding Future | Space Future | Animals Difference Now & Future | Space Difference Now & Future |
|---|---|---|---|---|---|---|---|---|---|---|
| Red panda (*A.f.fulgens*) | 108 | 78 | 44 | 122 | 138 | 109 | 49 | 158 | 30 | 36 |
| Red panda (*A.f.refulgens*) | 46 | 40 | 14 | 54 | 51 | 37 | 22 | 59 | 5 | 5 |
| North American river otter | 187 | 155 | 59 | 214 | 205 | 195 | 96 | 291 | 18 | 77 |
| Meerkat | 269 | 234 | 53 | 287 | 358 | 263 | 66 | 329 | 89 | 42 |
| Asian small-clawed otter | 79 | 57 | 32 | 89 | 95 | 60 | 30 | 90 | 16 | 1 |
| Binturong | 35 | 21 | 15 | 36 | 47 | 42 | 18 | 60 | 12 | 24 |
| Fossa | 41 | 24 | 25 | 49 | 35 | 22 | 15 | 37 | -6 | -12 |
| Dwarf mongoose | 60 | 35 | 22 | 57 | 65 | 42 | 2 | 44 | 5 | -13 |
| Banded mongoose | 38 | 38 | 0 | 38 | 44 | 43 | 15 | 58 | 6 | 20 |
| Black-footed ferret | 223 | 14 | 283 | 297 | 238 | 17 | 283 | 300 | 15 | 3 |
| White-nosed coatimundi | 52 | 43 | 24 | 67 | 64 | 52 | 15 | 67 | 12 | 0 |
| Kinkajou | 45 | 14 | 28 | 42 | 25 | 7 | 15 | 22 | -20 | -20 |
| Ringtail | 33 | 20 | 10 | 30 | 40 | 30 | 11 | 41 | 7 | 11 |
| Spotted-necked otter | 19 | 13 | 6 | 19 | 23 | 16 | 5 | 21 | 4 | 2 |
| Giant otter | 12 | 10 | 1 | 11 | 23 | 23 | 4 | 27 | 11 | 16 |
| Wolverine | 8 | 5 | 8 | 13 | 20 | 12 | 14 | 26 | 12 | 13 |
| Fisher | 3 | 3 | 2 | 5 | 17 | 11 | 5 | 16 | 14 | 11 |
| Striped skunk | 33 | 13 | 21 | 34 | 29 | 10 | 26 | 36 | -4 | 2 |
| Tayra | 7 | 2 | 3 | 5 | 4 | 3 | 0 | 3 | -3 | -2 |
| **Grand Total** | **1298** | **819** | **650** | **1469** | **1521** | **994** | **691** | **1685** | **223** | **216** |

- = decreased interest or space No longer recommended

TABLE 6: Historical ISIS/ZIMS Data for SSP & PMP Species

| | ISIS Database 31 December 1999 | | ISIS Database 01 August 2003 | | ISIS Database 15 February 2009 | | ISIS Database 18 February 2014 | | ZIMS Database 15 August 2019 | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Small Carnivore Species** | **# of Animals in N.A.** | **N. A. Institutions** | **# of Animals in N.A.** | **N.A. Institutions** | **# of Animals in N.A.** | **N.A. Institutions** | **# of Animals in N.A.** | **N.A. Institutions** | **# of Animals in N. A** | **N.A Institutions** |
| Red panda *(A. f. fulgens)* | 38.51 | 32 | 31.39.4 | 33 | 52.57.2 | 52 | 60.63.2 | 48 | 77.63.5 | 58 |
| Red panda *(A. f. refulgens)* | 26.29 | 20 | 23.14.1 | 17 | 24.24.3 | 19 | 28.27 | 20 | 33.40.3 | 26 |
| N. A. river otter | 134.130 | 125 | 127.132 | 125 | 126.139.1 | 140 | 115.103.2 | 95 | 105.102.2 | 95 |
| Meerkat | 190.162.45 | 72 | 186.153.61 | 54 | 219.164.33 | 73 | 234.162.37 | 9 | 243.178.10 | 72 |
| Asian small-clawed otter | 48.39 | 24 | 58.52 | 28 | 100.96.1 | 37 | 70.57.9 | 27 | 62.52 | 26 |
| Binturong | 71.53 | 36 | 35.32 | 33 | 28.31 | 38 | 17.18.1 | 19 | 31.28 | 24 |
| Fossa | 4.4 | 4 | 12.12 | 10 | 19.4.5 | 16 | 25.21 | 18 | 25.23.1 | 21 |
| Dwarf mongoose | 33.34 | 12 | 26.33.3 | 11 | 37.34.1 | 11 | 52.37.5 | 14 | 52.39.4 | 12 |
| Banded Mongoose | | | | | | | 28.19.6 | 5 | 22.16 | 4 |
| Black-footed ferret | 87.95 | 21 | 93.108.9 | 21 | 60.79.31 | 17 | 92.112.4 | 16 | 89.103.29 | 17 |
| White-nosed coatimundi (*N.narica*) Northern | 48.63 | 45 | 45.65 | 44 | 52.54.1 | 44 | 48.76.4 | 44 | 25.36 | 29 |
| Kinkajou | 46.58 | 48 | 36.45.1 | 47 | 41.52.1 | 62 | 37.52 | 52 | 34.36 | 45 |
| Ringtail | 16.22 (*B. astutus*) | 20 | 13.6 (*B. astutus*) | 18 | 20.17.0 | 27 | 10.19.3 | 17 | 16.22.3 | 20 |
| Spotted-necked otter | 0.2 | 2 | 10.6 | 4 | 13.14.1 | 7 | 13.18.2 | 9 | 8.10.1 | 9 |
| Giant otter | 2 | 1 | 2.2 | 2 | 8.8.0 | 4 | 17.16 | 7 | 17.19 | 9 |
| Wolverine | 5.6 | 6 | 14.14.1 | 11 | 13.11 | 16 | 7.5 | 6 | 9.8 | 5 |
| Fisher | 16.12 | 11 | 12.7 | 11 | 12.7 | 9 | 8.9 | 9 | 4.3 | 4 |
| Striped Skunk | | | | | | | 49.38.2 | 53 | 77.68.5 | 79 |
| Tayra | | | | | | | 9.9.3 | 7 | 3.4 | 5 |

New Program in 2009, no historical info
No longer Recommended for Management
Newly recommended for Managed program

Table 7: Animal Program Summary

| **Common Name** | **Date of Last PVA/B&T Plan** | **Current Population Size (N)** | **Current Number of Participating AZA Member Institutions** | **Projected % GD at 100 years or 10 generations**** | **SSP Program Designation** | **5 year target Population size** | **Space Needed** | **Recent 5 Year Population Trend** | **USFWS** |
|---|---|---|---|---|---|---|---|---|---|
| **(*Genus species*)** | | | | | | | **(Target Population size minus current space)** | **(increasing, decreasing, or stable)** | **IUCN** |
| | | | | | | | | | **CITES** |
| Red panda (*Ailurus fulgens fulgens)* | 2/21/2020 | 154 | 59 | 90.1 | Green | 150 | 150-154=-4 | Stable | Endangered Appendix I |
| Red panda (*Ailurus fulgens refulgens*) | 2/21/2020 | 86 | 30 | 89.5 | Green | 100 | 100-86=14 | Stable | Appendix I |
| North American river otter (*Lontra Canadensis)* | 1/9/2020 | 277 | 110 | 93.9 | Green | 300 | 300-277=23 | Stable | Endangered Appendix II |
| Meerkat (*Suricata suricatta)* | 2/20/2020 | 400 | 76 | 89.1 | Green | 500 | 500-400 =100 | Stable | Least Concern |
| Asian small clawed otter (*Aonyx cinereas)* | 9/23/2020 | 186 | 36 | 75.5 | Yellow | 220 | 220-186 =34 | Stable | Vulnerable Appendix II |
| Binturong (*Arctictis binturong*) | 6/20/2019 | 62 | 23 | NA? | Yellow | 75 | 75-62=13 | Increasing | Vulnerable Appendix III |
| Fossa *(Cryptoprocta ferox)* | 7/23/2018 | 61 | 31 | 63.9 | Yellow | 65 | 65-61 =4 | Stable | Vulnerable Appendix II |
| Dwarf mongoose (*Helogale parvula)* | 1/5/2018 | 109 | 15 | 34.62 | Yellow | 100 | 100-109 = -9 | Stable | Least Concern |
| Banded mongoose (*Mungos mungo*) | 2/14/2017 | 68 | 7 | 43.7 | Yellow | 75 | 75-68=7 | Increasing | Least Concern |
| Black-footed ferret (*Mustela nigripes*) | 10/30/2019 | 307 | 6 | 59 | Yellow | 350 | 350-307 =43 | Stable | Endangered |
| White-nosed coatimundi (*Nasua narica)* | 10/20/2018 | 52 | 40 | 52.9 | Yellow | 60 | 60-52= 8 | Decreasing | Least Concern Appendix III |
| Kinkajou (Potos flavus) | 7/18/2018 | 87 | 51 | N/A | Yellow | 75 | 75-87 =-12 | Stable | Least Concern |
| Ringtail (*Bassariscus astutus*) | 3/24/2020 | 39 | 20 | 56.7 | Red | 75 | 75-39 =36 | Stable | Least Concern |
| Spotted-necked otter (Hydrictis maculicollis) | 9/5/2019 | 20 | 15 | 36.5 | Red | 50 | 50-20=30 | Stable | Near Threatened Appendix II |
| Giant otter (*Pteronura brasiliensis)* | 1/29/2020 | 38 | 11 | 53.5 | Red | 55 | 55-38 = 17 | Stable | Endangered Appendix I |
| Wolverine (Gulo gulo) | N/A | 17 (ZIMS) | 5 | | Candidate | | | | Least Concern |
| Fisher (Martes pennanti) | N/A | 7 (ZIMS) | 4 | | Candidate | | | | Least Concern |
| Striped skunk (Mephitis mephitis) | N/A | 150 (ZIMS) | 79 | | Candidate | | | | Least Concern |

TABLE 8: Top Program Goals and Objectives

| | |
|---|---|
| **Common Name/ Scientific Name** | Red Panda (Ailurus fulgens fulgens) |
| **Animal Program Designation** | GREEN |
| **Primary Role** | Assurance Population |
| **Goal #1 / Essential Action(s)** | Export 8-10 animals to South Africa as per the 2019 GSMP masterplan by 2022. |
| **Progress towards Goal #1** | *10 animals have been identified in the 2020 Regional masterplan.* |
| **Goal #2 / Essential Action(s)** | Increase the number of participating institutions by two facilities per year as per the 2019 GSMP masterplan. New facilities will be determined via networking through AZA conference and recommendations from current institutions. Expect 10 new facilities by 2025. |
| **Progress towards Goal #2** | *Published Mar 2019, 1 new institution added* |
| **Goal #3 / Essential Action(s)** | Increase genetic variation by importing 4 females from other regions that have been identified via the GSMP masterplan by 2024. |
| **Progress towards Goal #3** | |
| **Goal #4/ Essential Action** | Work with PMC to identify potential inbreeding factors that might be affecting population and individual health. Plan to complete analysis by 2022. |
| **Progress towards Goal #4** | *Communications with PMC advisor has been started.* |
| **Common Name/ Scientific Name** | Red Panda (Ailurus fulgens refulgens) |
| **Animal Program Designation** | GREEN |
| **Primary Role** | Assurance Population |
| **Goal #1 / Essential Action(s)** | Export 3 genetically valuable animals to South Korea as per the 2019 GSMP masterplan and their accreditation by AZA by 2022. |
| **Progress towards Goal #1** | |
| **Goal #2 / Essential Action(s)** | Continue to work with the GSMP to incorporate new regions into the managed population. South America has been identified by the GSMP as the managem/ent responsibility of the SSP. |
| **Progress towards Goal #2** | *Animals have been identified to be imported to Chile from Japan by 2022.* |
| **Goal #3/ Essential Action** | Increase the number of participating institutions by one facility per year as per the 2019 GSMP masterplan. New facilities will be determined via networking through AZA conference and recommendations from current institutions. |
| **Progress towards Goal #3** | *Expect 5 new facilities by 2025.* |
| **Common Name/ Scientific Name** | North America River Otter (Lontra Canadensis) |
| **Animal Program Designation** | GREEN |
| **Primary Role** | Education/Exhibit Needs |
| **Goal #1 / Essential Action(s)** | Complete genetic study looking at subspecies role in breeding issue. Publish results by December 2021. |
| **Progress towards Goal #1** | *Work with Dr. Larry Buckley of Rochester Institute of Technology to complete the North American river otter genetic study. Recruit more institutional participants, finish DNA extractions, analyze the results, write and submit a manuscript for publishing by the end of 2021.* |
| **Goal #2 / Essential Action(s)** | Hold and conduct the ninth Otter Keeper Workshop in 2021 or by fall 2022. |
| **Progress towards Goal #2** | *Normally this workshop is held biennially. It was to be held at ZooMiami in October 2020, however, due to the aftermath of COVID-19, it was postponed. Reschedule the postponed 2020 workshop. Hold at ZooMiami if feasible or confirm a new location.* |
| **Goal #3 / Essential Action(s)** | Assist the newly recruited Education Advisor to get up to speed and connect her with the existing Education Advisors for the other otter species. |
| **Progress towards Goal #3** | *Facilitate the new Education Advisor's success by connecting her with the other Program Leaders and their Education Advisors and/or help them to recruit new Education Advisors. Suggest that they hold monthly online meetings and develop new materials for distribution to the IRs.* |
| **Goal #4 / Essential Action(s)** | Update the AZA Otter (Lutrinae) Care Manual by December 2022. |
| **Progress towards Goal #4** | *Recruit a committee of subject matter experts from the otter Program Leaders Institutional Representatives to update the Animal Care Manual. Review, edit, and publish the new version by December 2022.* |

| | |
|---|---|
| **Common Name/ Scientific Name** | Meerkat (Suricata suricatta) |
| **Animal Program Designation** | GREEN |
| **Primary Role** | Help facilitate institutional needs, maintain studbook and population management plan, act as a resource for husbandry and management questions |
| **Goal #1 / Essential Action(s)** | Improve reproductive management at the institutional level that will allow each facility to safely and effectively discontinue reproduction in their group once institution carrying capacity and/or breeding recommendations are met. |
| **Progress towards Goal #1** | *Provide contraception protocols, as recommended by the RMC, to each facility with breeding recommendations by the end of 2020.* |
| **Goal #2 / Essential Action(s)** | Facilitate a husbandry and management workshop for meerkat and mongoose species. |
| **Progress towards Goal #2** | *With institutional support and in conjunction with dwarf and banded mongoose SSP coordinators, plan a husbandry and management workshop to take place at an AZA mid-year meeting by 2022.* |
| **Goal #3/ Essential Action** | Update ACM information |
| **Progress towards Goal #3** | *With the assistance of the Meerkat SSP management group, update all meerkat portions of the Meerkat, Mongoose, Fossa ACM with the potential of creating a Meerkat specific ACM pending approval of the SCTAG by December 2022* |

| | |
|---|---|
| **Common Name/ Scientific Name** | Asian Small Clawed Otter (Aonyx cinereas) |
| **Animal Program Designation** | YELLOW |
| **Primary Role** | Research |
| **Goal #1/ Essential Action** | Increase genetic diversity through importation of new genetics from other regions. (timeline: 3-5 years).<br>Work with the PMC and studbook analyst to set parameters of age, goal for number of importations, number of facilities required for this, and other factors for importing otters from other regions to increase genetic diversity (14 months). Identify and obtain commitment from the determined number of facilities for importation of otters. (6 months post establishment of parameters). Identify the otters from other regions to import and begin that process (3-5 years from start of process). |
| **Progress towards Goal #1** | *Breeding and Transfer Plan published May 7, 2019* |
| **Goal #2 / Essential Action(s)** | Lifetime Reproductive Planning (timeline: 18-24 months)<br>Assist RMC in completing the Reproductive Viability Analysis (12 months) Use information form the RVA to develop the criteria utilized for individual otter LRP (8 months) |
| **Progress towards Goal #2** | *Carried out through 2019 B&T Plan* |
| **Goal #3/ Essential Action** | Improve reproductive success in below average size litters (timeline: 18 months)<br>Update analysis of litter size survival rates to include 2014-2019 litters (6 months). Gather 1st month pup weights from last ~15 years (6 months). Create guidelines/protocol for early decision making regarding intervention with pups (6 months). |
| **Progress towards Goal #3** | |
| **Common Name/ Scientific Name** | Binturong (Arctictis binturong) |
| **Animal Program Designation** | YELLOW |
| **Primary Role** | Education/Exhibit Needs |
| **Goal #1/ Essential Action** | Work with Veterinary Advisor to create reproductive assessment for unsuccessful breeding pairs by December 2020. Add an Education Advisor to aide in developing a plan to support the need for Ambassador animals by March 2021. |
| **Progress towards Goal #1** | |
| **Goal #2 / Essential Action(s)** | Work with Veterinary Advisor to develop a genetic analysis project to increase known pedigree in breeding population by June 2021. |
| **Progress towards Goal #2** | |
| **Goal #3/ Essential Action(s)** | Update/create binturong only Animal Care Manual by December 2021. |
| **Progress towards Goal #3** | |
| **Goal #4 / Essential Action(s)** | Work with Population Biologist to determine long term population viability by May 2021 |
| **Progress towards Goal #4** | |
| **Common Name/ Scientific Name** | Fossa (Cryptoprocta ferox) |
| **Animal Program Designation** | YELLOW |
| **Primary Role** | Education/Exhibit Needs |
| **Goal #1 / Essential Action(s)** | Task vet advisor with exploring causes and potential treatment for seasonal hair loss in female fossa by annual conference of 2020. |
| **Progress towards Goal #1** | |
| **Goal #2 / Essential Action(s)** | Identify Yellow SSP Steering Committee positions needed before mid-year conference of 2021 |
| **Progress towards Goal #2** | |
| **Goal #3 / Essential Action(s)** | Update and share list of bibliography references by mid-year conference of 2021. |
| **Progress towards Goal #3** | |
| **Common Name/ Scientific Name** | Dwarf Mongoose (Helogale parvula) |
| **Animal Program Designation** | YELLOW |
| **Primary Role** | Education/Exhibit Needs |
| **Goal #1 / Essential Action(s)** | Establish and maintain 14 holding or breeding facilities by 2024 |
| **Progress towards Goal #1** | |
| **Goal #2 / Essential Action(s)** | Update Animal Care Manual to include new parameters for introductions in breeding and non-breeding groups by 2023 |
| **Progress towards Goal #2** | |
| **Goal #3 / Essential Action(s)** | Review data collected from at least one institution regarding reproduction suppression by 2022 |

| | |
|---|---|
| **Progress towards Goal #3** | |
| **Common Name/ Scientific Name** | Banded mongoose |
| **Animal Program Designation** | YELLOW |
| **Primary Role** | Education/ Exhibit needs |
| **Goal #1 / Essential Action(s)** | With the assistance of AZA networking tools, identify two new facilities to participate in the program (12 months) and obtain a commitment to accept animals by December of 2021. |
| **Progress towards Goal #1** | |
| **Goal #2 / Essential Action(s)** | Increase genetic diversity of captive population through importation and exportation to and from EEP in the next 4-5 years. Work with the PMC and studbook analyst to set parameters for importation desires of new individuals (18 months). Coordinate with AZA and EAZA to identify facilities capable of accepting or exporting individuals within established parameters (12 months post establishment). Begin moving identified individuals. |
| **Progress towards Goal #2** | |
| **Common Name/ Scientific Name** | Black-footed Ferret (Mustela nigripes) |
| **Animal Program Designation** | YELLOW |
| **Primary Role** | To maintain a healthy genetic and demographic population for the Assurance Population for reintroduction in the wild. |
| **Goal #1 / Essential Action(s)** | Pair all females thru natural breeding and incorporate up to 5 females bred by AI (fresh) using MSI and investigate ways to increase reproductive success (September 2021). |
| **Progress towards Goal #1** | |
| **Goal #2 / Essential Action(s)** | Continue working with field partners |
| **Progress towards Goal #2** | |
| **Goal #3 / Essential Action(s)** | Increase use of Vitamin E diet supplementation and assess semen quality (ongoing) |
| **Progress towards Goal #3** | |
| **Goal #4 / Essential Action(s)** | Continue diet study and assess reproductive parameters (August 2020) |
| **Progress towards Goal #4** | |
| **Goal #5 / Essential Action(s)** | Expand partnership with EAZA, notably the European mink program |
| **Progress towards Goal #5** | |
| **Common Name/ Scientific Name** | White-nosed Coatimundi (Nasua narica) |
| **Animal Program Designation** | YELLOW |
| **Primary Role** | Education/Exhibit Needs |
| **Goal #1 / Essential Action(s)** | Use the PMC recommendations in the current Breeding & Transfer Plan to provide new breeding opportunities for white nosed coatis with the goal of getting at least two recommended pairs to successfully produce litters before the end of 2021. |
| **Progress towards Goal #1** | |
| **Goal #2 / Essential Action(s)** | To achieve target populations enlist at least one institution to import a pair of non-related, breeding age white nosed coati from South America by the end of 2021 for the purpose of breeding and producing a litter by 2022. |
| **Progress towards Goal #2** | |
| **Goal #3 / Essential Action(s)** | With management group consensus, set participation criteria and enlist at least two institutions to obtain pairs of non-related individuals for the purpose of breeding from reputable breeders or other non-AZA sustainability partners by the end of 2021 |
| **Progress towards Goal #3** | |

| | |
|---|---|
| **Common Name/ Scientific Name** | Kinkajou (Potos flavus) |
| **Animal Program Designation** | YELLOW |
| **Primary Role** | Education/Exhibit Needs |
| **Goal #1 / Essential Action(s)** | 1. **AAG Development**. Successful completion of the AAG for Kinkajou to be incorporated in ACM by June 2022<br>○ Final version of AAG around May 2022<br>▪ Address first accountability deadline of 18 months and see if an extension is needed<br>○ Behavioral advisors will be included in AAG committee to help produce AAG document. Committee will consist of a minimum of three members.<br>○ Discuss options with RMC and Vet advisors on how to manage aggression and how it ties into education use and challenges on pairing attempts - by Jan 2021 |
| **Progress towards Goal #1** | |
| **Goal #2 / Essential Action(s)** | 2. **Produce 1 – 2 pups in the next 3 years** by May 2022<br>○ Meant to gain husbandry experience and knowledge on how to best breed them as breeding knowledge and expertise has diminished in recent years.<br>○ Contact RMC/TAG Vet advisors to discuss challenges to breeding. Product will be a formal small report from RMC on contraception used in the species and summary of solutions discussed.<br>○ Behavioral advisors to help with a plan to improve breeding as well. |
| **Progress towards Goal #2** | |

| | |
|---|---|
| **Common Name/ Scientific Name** | Ringtail (Bassariscus astutus) |
| **Animal Program Designation** | RED |
| **Primary Role** | Education/Exhibit Needs |
| **Goal #1 / Essential Action(s)** | Recruit one new institution in 2021 and one new institution in 2022 to create space to return the population to yellow from red. |
| **Progress towards Goal #1** | |
| **Goal #2 / Essential Action(s)** | Get one institution to send a keeper to California in 2021 to go into the field with our Conservation partner, David Wyatt, to learn more about the species |
| **Progress towards Goal #2** | |
| **Goal #3 / Essential Action(s)** | Compile birth protocols from at least 3 institutions in 2020 to share with new breeding facilities to increase kit survival. |
| **Progress towards Goal #3** | |
| **Common Name/ Scientific Name** | Spotted-necked Otter (Hydrictis maculicollis) |
| **Animal Program Designation** | RED |
| **Primary Role** | Education/Exhibit Needs |
| **Goal #1 / Essential Action(s)** | Provide new partner and breeding opportunities for five pairs of otters with the goal of at least one offspring produced by July 2021 |
| **Progress towards Goal #1** | *Breeding and Transfer Plan September 2019* |
| **Goal #2 / Essential Action(s)** | Increase the number of participating institutions by at least one facility by December 2021 |
| **Progress towards Goal #2** | |
| **Goal #3 / Essential Action(s) 2015 - 2016** | Explore with the ARC the use of exogenous hormones to facilitate an increase in ovulation for female otters that have previously had a birth control implant by January 2021 |
| **Progress towards Goal #3** | |
| **Common Name/ Scientific Name** | Giant Otter (Pteronura brasiliensis) |
| **Animal Program Designation** | RED |
| **Primary Role** | Education/Exhibit Needs |
| **Goal #1 / Essential Action(s)** | Breeding: The current Giant Otter SSP population includes 38 individuals (18 males, 20 females, 0 unknown) held by 11 AZA institutions (35 in North America and 3 in South America). To achieve the target population of 55 individuals set by the Small Carnivore Taxon Advisory in 2019, breeding and successful rearing will need to be achieved. |
| **Progress towards Goal #1** | *Using the PMC recommendations in the soon-to-be-published 2020 Breeding & Transfer Plan, provides breeding opportunities for three pairs; with each female producing one litter over the next two years.* |
| **Goal #2 / Essential Action(s)** | Expand the program with additional zoos housing giant otters: With management group consensus, identify and solicit additional zoos to house giant otters and join the program. As holding space continues to be a challenge for managing this species, more zoos are needed within the program. |
| **Progress towards Goal #2** | *As identified in the 2020 Breeding & Transfer Plan, six transfer opportunities have been identified to meet institutional needs and alleviate overcrowding. With the goal of adding one new facility per year, beginning in 2022 and over the following two years, this program will be able to continue to grow, meeting breeding requirements while providing sustainable management solutions to institutions holding more than one group of otters* |
| **Goal #3 / Essential Action(s)** | Import from founding countries: With management group consensus, set participation criteria and identify animals from our Colombian and Brazilian partners for importation of one – three new founder animals over the next three years. |
| **Progress towards Goal #3** | *By importing and breeding new founders, we will improve the long-term genetic viability of the population by 2024.* |

TABLE 9: Management Update Table Recommended Taxa

| Common Name | Scientific Name | Previous Recommendation | Current Designation | Program Leader Change? | Program Leader/ Species Contact |
|---|---|---|---|---|---|
| Red panda | *Ailurus fulgens refulgens* | Yellow | Green | No | Sarah Glass - coordinator; Mary Noel - Studbook keeper |
| Meerkat | *Suricata suricatta* | Yellow | Green | No | Katie Kimble – Coordinator, Studbook keeper |
| Binturong | *Arctictis binturong* | Red | Yellow | Yes | Anne Nichols – Coordinator, Studbook keeper |
| Wolverine | *Gulo gulo* | Red | Candidate | Yes | Laurie Treschel – Studbook keeper |
| Fisher | *Martes pennanti* | Red | Candidate | Yes | Vacant |
| Striped skunk | *Mephitis mephitis* | NR | Candidate | No | Amanda Ista – Point Person |
| Tayra | *Eira barbara* | Candidate | Not Recommended | No | |

Explanation of Changes:

The Red Panda and Meerkat SSP programs both changed from Yellow SSPs to Green SSPs due to their increase in genetic diversity over 100 years, fitting the program management category set by AZA.

The Binturong SSP program moved from a Red SSP to a Yellow SSP because the population size increased fitting the program management category set by AZA.

The Wolverine SSP program changed from a Red SSP to a Candidate Program due to a decline in the number of animals in participating institutions and lack of breeding with high infant mortality rate. There is a large EEP population managed at the subspecies level and AZA insitutions are now working with the EEP.

The Fisher program moved from a Red SSP to a Candidate Program as it does not meet the minimum criteria for a Red SSP based on the current population size, however there is interest in the species based on the 2019 Space Survey, fitting the program management category set by AZA.

The Striped skunk program moved from Not Recommended to a Candidate program due to interest across participating institutions and the current population fitting the program management category set by AZA.

The Tayra program was moved from Candidate to Not Recommended due to decreasing population numbers, low and falling interest from institutions.

TABLE 10: Species Replacement

| Habitat (5) | NR Species | Recommended Species |
|---|---|---|
| Forests | Tayra | Wolverine, Coati, Ringtail |

5:ADW University of Michigan

TABLE 11: Animal Program Status

| Animal Program | Date Program Initiated | Current Program Leader | Date Leadership Assumed | Date of last Studbook | Date of last Breeding and Transfer Plan publication |
|---|---|---|---|---|---|
| Red Panda Green SSP | 1-Jun-84 | Sarah Glass, ZooKnoxville | 3-Dec-07 | | 21-Feb-20 |
| *Red Panda Studbook International Studbook* | | Mary Noell, Cincinnati Zoo | 3-Mar-03 | 16-Jan-18 | |
| North America River Otter Green SSP | 7-Feb-00 | David Hamilton, Seneca Park Zoo | 7-Feb-00 | | 8-Jan-21 |
| *North American River Otter Studbook* | 7-Feb-00 | David Hamilton, Seneca Park Zoo | 7-Feb-00 | 01-Dec-20 | |
| Meerkat Green SSP | 8-Apr-96 | Katie Kimble, Sedgwick County Zoo | 9-Jan-01 | | 20-Feb-20 |
| *Meerkat Studbook* | 8-Apr-96 | Katie Kimble, Sedgwick County Zoo | 9-Jan-01 | 28-Apr-19 | |
| Asian Small-clawed Otter Yellow SSP | 12-Jan-83 | Sarah Duncan, Tulsa Zoo | 27-Jun-17 | | 23-Sep-20 |
| *Asian Small-clawed Otter International Studbook* | 1-Feb-85 | Sarah Duncan, Tulsa Zoo | 3-Dec-07 | 15-May-17 | |
| Binturong Yellow Program | 14-Dec-99 | Anne Nichols, Brookfield Zoo | 23-Mar-18 | 22-Apr-19 | 20-Jun-19 |
| *Binturong Studbook* | 14-Dec-99 | Anne Nichols, Brookfield Zoo | 23-Mar-18 | 22-Apr-19 | |
| Fossa Yellow SSP | 3-May-05 | Mandi Krebs, Omaha's Henry Doorly Zoo | 30-Jan-06 | | 23-Jul-18 |
| *Fossa Studbook* | 3-May-05 | Mandi Krebs, Omaha's Henry Doorly Zoo | 30-Jan-06 | 21-Mar-18 | |
| Dwarf Mongoose Yellow SSP | 31-Dec-02 | Stephanie Richmond, Saint Louis Zoo | 20-Feb-15 | | 5-Jan-18 |
| *Dwarf Mongoose Studbook* | 31-Dec-02 | Stephanie Richmond, Saint Louis Zoo | 20-Feb-15 | 28-May-19 | |
| Banded Mongoose Yellow SSP | 7-May-13 | Nora Beirne, Central Park Zoo | 4-Oct-18 | | 30-Nov-20 |
| *Banded Mongoose Studbook* | 16-Mar-12 | Nora Beirne, Central Park Zoo | 4-Oct-18 | 15-Aug-16 | |
| Black-footed Ferret Yellow SSP | 10-Oct-89 | Paul Marinari, Smithsonian's Conservation Biology Institute | 10-Oct-16 | | 22-Oct-20 |
| *Black-footed Ferret Studbook* | | Paul Marinari, Smithsonian's Conservation Biology Institute | 12-Dec-97 | 21-Aug-19 | |
| White-nosed Coatimundi Yellow SSP | 17-Mar-00 | Lauren Hinson, Brevard Zoo | 11-Jul-18 | | 10-Oct-18 |
| *White-nosed Coatimundi Studbook* | 17-Mar-00 | Lauren Hinson, Brevard Zoo | 11-Jul-18 | 18-Oct-18 | |
| Kinkajou Yellow SSP | 19-Apr-02 | Liz Toth, Boonshoft Museum of Discovery | 2-Jan-06 | | 18-Jul-18 |
| *Kinkajou Studbook* | 19-Apr-02 | Liz Toth, Boonshoft Museum of Discovery | 2-Jan-06 | 29-Dec-20 | |
| Ringtail Red Program | 5-Sep-01 | Debbie Thompson, Little Rock Zoo | 5-Sep-01 | 29-Dec-20 | 24-Mar-20 |
| Spotted-necked Otter Red Program | 3-May-05 | Teresa Shepard, Omaha's Henry Doorly Zoo | 3-Apr-18 | 1-Mar-19 | 5-Sept-19 |
| Giant Otter Red Program | 2006 | Candace Sclimenti, Los Angeles Zoo | 24-Sep-19 | | 29-Jul-20 |
| *Giant Otter Studbook* | 2006 | Stephanie Eller, Philadelphia Zoo | 3-Sep-19 | 8-Jan-20 | |
| Wolverine Candidate Program | 7-Feb-00 | Laurie Trechsel, Minnesota Zoo | 8-Nov-13 | 15-Dec-13 | 2-Sep-09 |
| Fisher Candidate Program | 3-May-05 | Vacant | | 5-Jan-12 | N/A |
| Striped Skunk Candidate Program | 17-Aug-10 | Amanda Ista, Milwaukee County Zoo | 17-Aug-10 | | |

**TAG Recommended Resources**

**Responsible Population Management**
The SCTAG has adopted the AZA Policy on Responsible Population Management See www.aza.org

**Responsible Population Management: Humane Euthanasia**
The Small Carnivore TAG recognizes that humane euthanasia is a management tool that may be practiced to ensure that the population remains genetically and demographically healthy for the long-term. Zoos are encouraged to contact the Program Leader before euthanizing an SSP Program animal for management purposes, in order to optimize animal welfare. The decision to utilize humane euthanasia as a management tool is at the discretion of the individual institution and should follow the institution's policy as outlined in the AZA Policy on Responsible Population Management.

**Program Animal Policy**
The SCTAG has adopted the AZA Ambassador Animal Policy – updated June 2015. See www.aza.org

**Contraception**
For species specific information, refer to the AZA Reproductive Management Center (RMC) at www.stlzoo.org/contraception Taxonomic Group: Small Carnivores

## Appendix A

**Responding Institutions**

| | | |
|---|---|---|
| *Africam Safari* | Houston Zoo | Reid Park Zoo |
| Akron Zoo | Hutchinson Zoo | *Resorts World Sentosa Dolphin Island & SEA Aquarium* |
| Albuquerque Biological Park ABQ BioPark | *Idaho Falls Zoo* | *Riverside Discovery Center* |
| Alexandria Zoological Park | Indianapolis Zoo | Rolling Hills Zoo |
| Aquarium of the Bay | *International Exotic Animal Sanctuary* | Sacramento Zoo |
| Arizona-Sonora Desert Museum | Jackson Zoo | *Safari West Wildlife Preserve* |
| Audubon Zoo | *Jenkinson's Aquarium* | Saginaw Children's Zoo |
| Bergen County Zoo | John Ball Zoo | Saint Louis Zoo |
| Binder Park Zoo | Kansas City Zoo | Salisbury Zoo |
| Binghamton Zoo at Ross Park | Lake Superior Zoo | San Antonio Zoo |
| Biodôme de Montréal | Lee Richardson Zoo | San Diego Zoo |
| Birmingham Zoo | *Lemur Conservation Foundation* | San Diego Zoo Safari Park |
| Boonshoft Museum of Discovery | Lincoln Children's Zoo | Santa Ana Zoo |
| Brandywine Zoo | Lincoln Park Zoo | Santa Barbara Zoo |
| *BREC's Baton Rouge Zoo* | Little Rock Zoo | Santa Fe College Teaching Zoo |
| Brevard Zoo | Living Desert Zoo and Gardens State Park | Scovill Zoo |
| Brookfield Zoo | Los Angeles Zoo and Botanical Gardens | *SEA LIFE Michigan* |
| Brookgreen Gardens | *Lubee Bat Conservancy* | Seattle Aquarium |
| Buttonwood Park Zoo | *Maritime Aquarium* | SeaWorld San Antonio |
| Caldwell Zoo | Maryland Zoo | Sedgwick County Zoo |
| Calgary Zoo | Mesker Park Zoo & Botanic Garden | Seneca Park Zoo |
| Cameron Park Zoo | Mill Mountain Zoo | Sequoia Park Zoo |
| Capron Park Zoo | Miller Park Zoo | *Shark Reef Aquarium at Mandalay Bay* |
| Central Florida Zoo | Milwaukee County Zoo | Smithsonian Conservation Biology Institute |
| Chattanooga Zoo | Minnesota Zoo | *Sophia M Sachs Butterfly House* |
| Cincinnati Zoo & Botanical garden | *Museum of Life and Science* | *St. Augustine Alligator Farm Zoological Park* |
| Cleveland Metroparks Zoo | Naples Zoo | Staten Island Zoo |
| *Clyde Peeling's Reptiland* | *National Black-footed Ferret Conservation Center* | Sunset Zoological Park |
| Columbus Zoo and Aquarium | *National Mississippi River Museum & Aquarium* | Texas State Aquarium |
| Como Park Zoo and Conservatory | *Natural Encounters, Inc.* | *The Elephant Sanctuary In Tennessee* |
| Connecticuts Beardsley Zoo | *New England Aquarium* | *The Living Desert Zoo & Gardens* |
| Cosley Zoo | North Carolina Aquarium at Pine Knoll Shores | *The Wilds* |
| CuriOdyssey | North Carolina Zoo | Toledo Zoological Gardens |
| Dallas Zoo | Northeastern Wisconsin Zoo | Topeka Zoo and Conservation Center |
| *David Traylor Zoo of Emporia* | Northwest Trek Wildlife Park | Trevor Zoo |
| Denver Zoo | Oakland Zoo | Turtle Back Zoo |
| Detroit Zoological Society | Oglebay Good Zoo | Utah's Hogle Zoo |
| Dickerson Park Zoo | Oklahoma City Zoo | *Utica Zoo* |
| Disney's Animal Kingdom | Omaha's Henry Doorly Zoo and Aquarium | *Virginia Aquarium & Marine Science Center* |
| *Downtown Aquarium Denver* | *Oregon Coast Aquarium* | Virginia Zoo |
| El Paso Zoo | Oregon zoo | Western North Carolina Nature Center |
| Ellen Trout Zoo | Palm Beach Zoo & Conservation Society | *White Oak* |
| Elmwood Park Zoo | Peoria Zoo | Wildlife Safari |
| *Endangered Wolf Center* | Philadelphia Zoo | Woodland Park Zoo |
| Fort Wayne Children's Zoo | Phoenix Zoo | Zoo Atlanta |
| Fort Worth Zoo | Pittsburgh Zoo & PPG Aquarium | Zoo Boise |
| Fossil Rim Wildlife Center | Point Defiance Zoo & Aquarium | Zoo de Granby |
| Fresno Chaffee Zoo | Potter Park Zoo | Zoo Knoxville |
| *Fundación Temaiken* | Pueblo Zoo | *Zoo Leon* |
| Gladys Porter Zoo | *Queens Zoo* | Zoo Miami |
| Greensboro Science Center | Racine Zoological Gardens | ZooAmerica |
| Greenville Zoo | Rainforest and Aquarium at Moody Gardens | *Zoologico de Cali* |
| *Grizzly & Wolf Discovery Center* | Red River Zoo | ZooTampa at Lowry Park |

**Appendix B**

## APM Committee RCP Review Checklist

**** Please note that this checklist must be submitted with the RCP to the AZA Conservation & Science Department (conservation@aza.org) and the APM Committee Vice Chair of TAGs.*
**** Please write the page numbers in the "pg #" column where each required element may be found in the submitted RCP.*
**** This template is available in a Word form at https://www.aza.org/templates-and-applications*

TAG: _____Reviewer:_____

| | pg # | Yes | No | Comments |
|---|---|---|---|---|
| I. **Background** | | | | |
| **A. Table of contents & page numbers** *(p. 41)* | 1 | | | |
| **B. TAG Mission** *(p. 41)* | 2 | | | |
| **C. TAG Operational Structure, including Steering Committee members', Program Leaders, and Advisors' contact information (phone numbers and emails)** *(p. 41)* | 4 | | | |
| **D. TAG Definition, specifying all taxa within TAG purview** *(p. 41)* | 6 | | | |
| **E. Conservation Status of Taxa** *(p. 41)* | 7 | | | |
| II. **Species Management** | | | | |
| **A. Species Selected for Management** | 15-19 | | | |
| 1. Selection Criteria defined *(p. 41-43)* | 15-18 | | | |
| 2. Decision tool for prioritizing taxa presented *(p. 40-43, App H)* | 16 | | | |
| 3. Relative importance of criteria defined *(p. 41)* | 18 | | | |
| 4. Results of species selection process presented *(p. 41)* | 19 | | | |
| 5. Includes rationale for including/excluding taxa within purview *(p. 41)* | 18 | | | |
| **B. Space Analysis** | 37 | | | |
| 1. Assessment tool defined (e.g., survey, studbook or record keeping data) *(p. 45-46)* | 37 | | | |
| 2. If space survey used, at least 80% of all institutions with IRs responded (include #'s) *(p. 45-46)* | 37 | | | |
| 3. Space analysis performed (current and required space) *(p. 45-47)* | 37 | | | |
| **C. Animal Program Summary Table** | 39 | | | |
| 1. Sustainability Criteria (population size, # institutions, projected gene diversity) listed for each Animal Program, as known *(p. 47-49)* | 39 | | | |
| 2. Animal Programs designated as Green, Yellow SSP, and Red SSP Programs *(p. 38-40, 45)* | 39 | | | |
| 3. Animal Program target population sizes assigned *(p. 46-47)* | 39 | | | |
| 4. Population trends listed, if known *(p. 46-47)* | 39 | | | |
| 5. Results of space analysis listed *(p. 45-47)* | 37 | | | |
| 6. Conservation status listed for each SSP Program *(p. 41)* | 39 | | | |
| 7. Candidate Programs information provided, if applicable *(p. 40, 45)* | 39 | | | |
| **D. Animal Program Roles, Goals, and Essential Actions Table** *(p.50-51)* | 40 | | | |
| **E. Replacement Table(s), if appropriate** *(p. 52)* | 46 | | | |
| **F. Recommendation Updates Table** *(p. 52-53)* | 46 | | | |
| **III. Additional Information** | | | | |
| A. AZA/Board-approved positions, white papers, and guidelines *(p. 54)* | 48 | | | |
| B. Draft RCP was posted to IRs for 30 day comment period? *(p. 54-55)* | yes | | | |

APM Committee Reviewer Comments: