

E. IMPORT/EXPORT/RE-EXPORT OF LIVE ANIMALS (CITES/ESA)

General Information

This application covers activities involving LIVE CITES and ESA listed animals.

Review this application carefully and **provide complete answers to all of the questions**. If you are applying for multiple species, be sure to indicate which species you are addressing in each response. **If more space is needed, attach a separate sheet with your responses, numbered according to the questions.**

Please allow at least 90 days for the application to be processed.

How do I determine whether the species is protected under CITES and/or the ESA?

CITES	ESA
To determine whether an animal species is protected under CITES, when the species was listed, or whether exemptions apply to your requested activity, see the list of CITES species	<p>To determine whether an animal species is protected under the ESA, please review the list of ESA-listed species in the Code of Federal Regulations.</p> <p>Please be aware that any permit request involving an ESA endangered species must be published in the Federal Register for a required 30-day public comment period.</p>

Questions

If you have any questions regarding an action you are requesting authorization for please contact the Division of Management Authority at managementauthority@fws.gov.

Please note: for renewal or amendment of a multi-use permit being requested **within the 5-year** Federal Register public notice period, use application [3-200-52](#)

This form should NOT be used for:

- Pre-Convention, Pre-Act, or antique ([antique exemption criteria](#)) specimens (use application [3-200-23](#))
- Captive Bred Wildlife Registration (use application form [3-200-41](#))
- ESA Plants (use application form [3-200-36](#))
- Import of LIVE African Elephants from Botswana, Namibia, South Africa, and Zimbabwe and Southern White Rhinoceros from eSwatini and South Africa (use application form 3-200-37f)

Electronic Information Submission

Electronic submission of inventories, photographs, and receipts: For hard copy applications, if you wish to provide information electronically, please include a flash drive containing this information with your physical application.

1. Name and address where you wish the permit to be mailed, **if different from physical address**. If you would like expedited shipping, please enclose a self-addressed, pre-paid, computer-generated, courier service airway bill. If unspecified, all documents will be mailed via regular mail through the U.S. Postal Service.
2. Point of contact if we have questions about the application (name, phone number, and email).

Amanda Mazza, [REDACTED] amanda.mazza@duke.edu

3. Have you or any of the owners of the business (if applying as a business, corporation, or institution), been assessed a civil penalty or convicted of any criminal provision of any statute or regulation relating to the activity for which the application is filed; been convicted, or entered a plea of guilty or nolo contendere, for a felony violation of the Lacey Act, the Migratory Bird Treaty Act, or the Bald and Golden Eagle Protection Act; forfeited collateral; OR are currently under charges for any violation of the laws mentioned above?

☒ No ☐ Yes

If you answered "Yes" to Question 3, provide: a) the individual's name; b) date of charge; c) charge(s); d) location of incident; e) court, and f) action taken for each violation. Please be aware that a "Yes" response does not automatically disqualify you from getting a permit.

4. Type of Activity: ☐ Import
☒ Export
☐ Re-export (e.g. exporting a specimen that was previously imported into the United States)

5. The current location of the **animal(s) (if different from the physical address)**:

Name: Philadelphia Zoo

Address: 3400 W Girard Ave

City: Philadelphia

State/Province: PA

Postal Code: 19104

Country: United States

6. Name: Lemur Conservation Foundation

Address: 42500 73rd Ave E

City: Myakka City

State/Province: FL

Postal Code: 34251

Country: United States

7. Recipient/Sender:

- If **export/re-export**, provide name and **physical address** of the recipient in the foreign country.
- If **import**, provide name and **physical address** of the exporter/re-exporter in the foreign country.

Name:

Tierpark Berlin -Friedrichsfelde GmbH

Address:

Am Tierpark 125

City:

10319 Berlin

State/Province:

Postal Code:

Germany

Country:

8. For **each animal** involved in the import/export/re-export, provide (you may use the table below):

- a. Scientific name (genus, species, and *if applicable*, subspecies)
- b. Common name
- c. Approximate or actual birth/hatch date (mm/dd/yyyy)
- d. Wild or captive-born
- e. Quantity
- f. Sex (males.females.unknown sex, 10.2.3)
- g. Permanent markings and/or identification information (microchip #, leg band #, tattoos, studbook #).

a. Scientific name (genus, species, and <i>if applicable</i> , subspecies)	b. Common Name	c. Approximate or Actual Birth/Hatch Date (mm/dd/yyyy)	d. Wild (W) or Captive- born (C)	e. Quantity	f. Sex (male. female. unknown sex, ex: 1.0.0)	g. Permanent markings/ID information (e.g., microchip #, leg band #, tattoo, studbook #, etc.)
EXAMPLE: <i>Pan troglodytes</i>	Chimpanzee	08/01/2006	C	1	1.0.0 OR male	Studbook# 152; Microchip# 00056321-00
Eulemur Mongoz	Mongoose Lemur	04/04/2017	C	1	1.0.0	"Nacho" Studbook# 1303; Transponder#00-07A0-A1B7
Eulemur Mongoz	Mongoose Lemur	06/07/2019	C	1	0.1.0	"Zoe" Studbook# 1317; Transponder#
Eulemur Mongoz	Mongoose Lemur	04/13/2016	C	1	1.0.0	"Javier" Studbook# 1294; Transponder# 024*018*263
Eulemur Mongoz	Mongoose Lemur	03/30/2012	C	1	0.1.0	"Natasha" Studbook# 1271; Transponder# 00-06E6-F50B

Source of Specimen

9. For **each captive-born/captive-hatched animal(s)**, provide a signed and dated statement from the breeder or other appropriate documentation (e.g. Species 360 report) that includes the following: Please see attachments
- a. Scientific name (genus, species, and *if applicable*, subspecies),
 - b. Common name,
 - c. Name and address of the facility where the animal was bred and born,
 - d. Birth/hatch date (mm/dd/yyyy),
 - e. Identification information (studbook, microchip, leg band, etc.),
 - f. Name and address of the facility where the parental stock is located,
 - g. A statement from the breeder that the animal was bred and born at the breeder's facility (including the facility's name and address), and
 - h. If you are not the breeder, provide documentation demonstrating the history of transactions (e.g., chain of custody or ownership of the animal).

10. For **each animal(s) taken from the wild**, provide:

- a. Scientific name (genus, species, and *if applicable*, subspecies),
- b. Common name,
- c. Specific location (e.g. county, state, province, country) where the animal was removed from the wild;
- d. The name of the individual(s) who collected the animal(s) and their authorization to do so, including copies of foreign and domestic (Federal, State, and/or Tribal) government collecting permits, licenses, contracts and/or agreements;
- e. Method of collection, including capture protocol and any injury and mortality experienced during collection, transport, and holding;
- f. Information related to any remuneration, either financial or in-kind, provided for acquiring the animal(s);
- g. Efforts to use captive specimens (e.g., captive-born, captive-held) in lieu of taking animals from the wild.

11. For **each animal being re-exported** (e.g., exporting animal(s) previously imported into the United States), provide:

- a. A copy of the CITES export or re-export document issued by the appropriate CITES office in the country from which the wildlife was imported (this document is **stamped cancelled** by USFWS Office of Law Enforcement upon import inspection); and
- b. A copy of your Declaration for Importation or Exportation of Fish or Wildlife (Form 3-177) **cleared** by USFWS Office of Law Enforcement.
- c. A copy of the ESA permit that authorized the original import.
- d. If you did not make the original import, provide documentation outlining chain-of-ownership since import, including:
 1. A copy of the importer's clearance documents (a, b & c above) and,
 2. Subsequent invoices (or other documentation) showing the history of transactions leading to your ownership of the animals after import (chain of custody).

Description and Justification For Requested Activity

Describe the purpose of your proposed activity.

12. If **scientific research**, provide:

- a. A copy of the research proposal (outlining the purpose, objectives, and methods),
- b. Detailed information on capture methods including:
 - i. who will be capturing the animals
 - ii. equipment used
 - iii. measures taken to prevent injury and mortality
- c. An explanation of whether other similar work has already been conducted or is currently being conducted,
- d. A copy of the study's Institutional Animal Care and Use Committee (IACUC) form (*if applicable*),
- e. Peer-reviewed scientific papers published from this research (*if applicable*).

13. If **conservation education and/or zoological display**, provide:

- a. Objectives of proposed activity in support of an education program,
- b. Copies of educational materials (e.g., handouts, text of signage or public presentations), incorporating the following information:
 - i. Status in the wild
 - ii. Current threats
 - iii. Conservation efforts

14. If **captive propagation for the conservation and survival of the species**, provide:

- a. A description of how the species will be propagated (e.g. artificial insemination, breeding pairs/groups),
 - i. The species being shipped as 2 breeding pairs.
 - b. Documentation showing your participation in an established breeding program (example: current breeding plan outlining your role in the program AND letter from the breeding coordinator confirming your participation in this breeding program.) See attached
 - c. How your breeding stock is managed to maintain genetic vitality, including:
 - i. avoidance of inbreeding,
 - ii. considerations of average kinship,
 - iii. differences in paternal and maternal average blood relationships/relatedness,
 - iv. carrying capacity of your facility,
 - v. disposition of progeny.
 - d. Plans and agreements for future re-introduction (*if applicable*). N/A
15. Please provide a detailed description on how the proposed activities will **enhance or benefit the wild population within its native range** (e.g., direct or indirect conservation efforts) and provide documentation (e.g., **signed** memorandums of understanding) demonstrating your commitment to supporting the program and how the program contributes directly to the species identified in your application.

The expansion of this important SSP breeding program to Europe greatly enhances options for population growth in both regions, leading to a more genetically diverse and resilient assurance population. Additionally, exhibiting mongoose lemurs at Tierpark Berlin Zoo provides critically important conservation education messaging for visitors. Such messaging supports not only lemur conservation projects in the wild but also expands the public's awareness of the challenges facing Madagascar's ecosystems and strengthens support for a wide range of conservation initiatives in the country.

Tierpark Berlin Zoo- Conservation Work in Madagascar

Tierpark Berlin is a member of the Association Européenne pour l'Etude et la Conservation des Lémuriens or The European Association for the Study of Lemur Conservation (AEECL) The AEECL activities focus on the Sahamalaza Peninsula in Northwestern Madagascar. This area is home to several lemur species including Coquerel's sifakas and blue-eyed black lemurs. Key components of the AEECL programs are forest restoration, increasing protection of forests in the National Park by increasing patrolling to decrease poaching and trapping of lemurs, protecting forests from fires by building fire breaks, and partnering with local communities to improve livelihoods, education and health care. Work supported by Tierpark Berlin also augments a variety of local environmental awareness initiatives including training members of the local community to become tourist guides. Guide training helps local community members increase their knowledge of the local ecosystem and lemur species, thus helping them to become ambassadors for Madagascar's environment. Buy in by local community members is critical for enhancing protection of lemurs and the forests on which they depend.

Technical Expertise & Facilities

- For **export/re-export**, provide information for the **receiving institution**.
 - For **import**, provide information for **your institution**.
 - For **import to multiple facilities**, provide information for **all receiving institutions**.
16. CV or resume outlining the technical experience of each caretaker working with, maintaining, and/or propagating **each** species, as it relates to the proposed activities, including experience with similar species.
- Please see attachment: CV's of the following members of staff at Tierpark Berlin Zoo**
- **Dr. Andreas Pauly, Curator of Primates**
 - **Axel Oberlander, Vice Head Keeper, Primates**

- **Ute Jany, Animal Keeper**
- **Nils Frankenfeldt, Animal Keeper**

17. Current inventory of the species at the facility (males.females.unknown sex, e.g., 10.2.3),
18. Number of years the species has been maintained at the facility,
19. Number of births per species per year over the last 5 years,
20. Number of mortalities per species (or similar species) per year over the last 5 years and steps taken to avoid or decrease such mortalities,

Species	Years maintained	Number of successful births for the last five years	List of mortalities in the last five years (infants and adults)
Ring-tailed lemur	38	3	2*
B & W Ruffed lemur	34	0	4**
Belted Ruffed lemur	2	0 (male group)	0
Red ruffed lemur	37	0 (because of breeding restrictions by the EEP)	0
Black lemur	36 (species phased out in 2018)	0	0
Red-bellied lemur	19	5	1***
Mongoose lemur	13	0	2****
Red-collared brown lemur	10	2	3*****
Blue-eyed black lemur	1 (2018-2019)	0	3*****
Coquerel's sifaka	1	0	3*****
Red howler monkey	9	4	0
Francois langur	1	0 (male group)	0

Deaths:

****Lemur catta***

0.1: pulmonary edema (5 months old)

1.0: *Taenia crassiceps* cysts in the lungs (28 years old)

*****Varecia variegata variegata***

1.0: pericardial effusion (15 years old)

1.0: hepatopathy (17 years old)

0.2 (siblings): stillbirth after sectio caesarea (mother 15 years old at the time of birth, first pregnancy, breeding recommendation of the EEP coordinator)

******Eulemur rubriventer***

0.1: euthanasia after 3 surgeries (*Taenia crassiceps* cysts removed) in 3 years (22 years old)

*******Eulemur mongoz***

1.0: emphysema of the lungs (20 years old)

0.1: apoplexy (25 years old)

********Eulemur collaris***

0.1 juv.: tore off mandibular and tongue (probably caused by the male): euthanized

0.1 juv.: bite wounds (nose, upper jaw and face: probably caused by the parents)

1.0: *Clostridium perfringens* infection (see *Eulemur flavifrons*)

********Eulemur flavifrons***

2.1: *Clostridium perfringens* infection

********Propithecus coquereli*** (all necropsy reports were sent to the DLC)

1.0: sudden cardiac death due to an unknown hypertrophic cardiomyopathy

1.0 juv.: cerebral hemorrhage due to a trauma (fell down to the ground, unable to cling: premature birth: 77.8 g)

1.0: ulcerative enteritis: no detection of severe pathogens: suspected intestinal infarction

Measures taken to decrease mortality:

After the death of 4 lemurs in 2019 due to a *Clostridium perfringens* infection all lemurs of the collection were vaccinated against *Clostridia* except the Coquerel's sifakas (publication attached, see attachment). Since the vaccination we had no more deaths caused by a *Clostridium* infection.

A detailed description, diagrams, and photos clearly depicting the existing facilities **where the wildlife will be maintained** including: dimensions, construction materials, and protection from the elements. Do not provide blueprints;

There is a large outdoor exhibit which is viewed by guests from the inside of the neighboring primate building via a glass window. Guests do not have physical access to this enclosure, making it a quiet and a non-stressful space, with many areas of privacy. The indoor facility is composed of three enclosures. The front of two of these enclosures is covered by a large glass panel, so that the animals can be observed by the visitors without direct physical contact. The indoor facility is currently inhabited by other lemur species, however these animals will be moved to other enclosures in the zoo. There are two large adjoining rooms with glass panels for viewing, and one room off display from the public. These indoor spaces will serve as housing during cold weather in addition to serving as space to separate a dam and her newborn infant from the family group if needed. Tunnels between indoor rooms have visual and olfactory connections. All of the indoor spaces have chutes and tunnels connecting them to the outdoor spaces. The third enclosure consists of an interior room which cannot be viewed by the public (photo below) which provides sanctuary for animals seeking escape human observation. Each of the two glass fronted enclosures has an area of 15.54 m² and a height of 4.5 m (= 69.93 m³). The off exhibit enclosure dimensions are 15.09 m² with a height of 4.5 m (= 67.90 m³). The total size of the indoor facility is 207.76 m³. The three enclosures are connected and can be separated through shift doors (photo below of slide covered with metal shift door).



Each of the three enclosures can be used for short term and long term separation. If it becomes necessary to isolate an aggressive animal to shift door can be closed when needed. When the shift doors are open animals have visual and olfactory contact with family members through wire mesh. If needed, the wire mesh can be removed to provide animals physical access to other family members. Plans call for the creation of 2-3 more shift doors between the two indoor enclosures visible to visitors. The side walls of the enclosures consist of concrete covered by tiles. Dimensions of the shift doors between the indoor compartments are: 90 cm x 85 cm. Mesh size: 4 cm x 4 cm.

During winter, when animals are predominantly housed indoors due to cold temperatures, daytime illumination is provided by artificial lighting, and daylight hours are extended slightly longer than astronomical sunrise/sunset to encourage animals to remain active during visitation hours. Animals are allowed outdoor access all day when temperatures are above 45 °F. If it drops below 45 °F, animals are brought inside. These temperatures are in line with the guidelines for the DLC animals. The rear of each indoor enclosure consists of a galvanized wire grid. Included in the caging is the entrance door for the keepers and a tunnel for the animals which leads to the outside enclosure. Between the indoor and outdoor portions are connecting passages which measure 96 cm (H) x 49 cm (W) x 110 cm (L). These passages are 225 cm above the ground. Currently, the furnishing of the indoor enclosures consist of natural tree trunks, branches and ropes. Outdoor facility: The outdoor enclosure covers an area of 153.4 m² with a height of 4.0 m (= 613.6 m³). The front of the enclosure consists of large glass panels. The facility is bordered by galvanized fence. The ceiling consists of mesh. There is no access for visitors to this enclosure. The visitors can only observe the lemurs through the glass panels. The ground consists of grass-covered top soil, sand, pebble stones and rocks. There are large trunks, branches and vine, which enable the lemurs to locomote naturally (see attached pictures)

Photos of the current space are provided below:



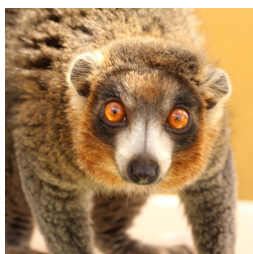
21. Approximate carrying capacity for the species at the facility.

Transport/Shipment of Live Animals

22. Transport conditions for live animals must comply with the CITES Guidelines for Transport of Live Animals. All air transport must also comply with the International Air Transport Association (IATA) live animal regulations (contact airline for information). As such, provide:

- a. The type, size, and construction of any shipping container and,
The pairs of *Eulemur mongoz* will be shipped individually, in rigid plastic pet kennel carriers (22" x 16" x 16") with doors and ventilation grates which have been modified to meet IATA Container requirements #31 and which are suitable for the shipment of lemurs. Modifications include a slatted floor firmly fixed to the base of the kennel, which will be covered with absorbent material. A branch-like structure will be inserted and anchored in the kennel, suitable for animals to climb onto and/or hold for security. Industrial strength Zip ties will be securely fastened to each of the four corners of the metal kennel door to assure doors cannot be opened without dedicated cutters. Fine wire mesh will be securely fastened to all kennel doors and ventilation openings to prevent animals from reaching fingers or toes outside of the kennels. Muslin-type drapes will be secured over all doors, windows and ventilation openings to make sure animals have visual privacy.
- b. The arrangements for watering or otherwise caring for the wildlife during transport.
A plastic water bottle will be securely attached to the crate giving the lemurs access to fresh water during transport, and will be removable for refilling as needed. Sufficient amounts of primate chow will be attached to the top of the crate in a zip lock bag which allows the animals to be fed in route in the event of flight delay.

All international shipment(s) must be through a designated port. A [list of designated ports](#) (where an inspector is posted) is available. If you wish to use a port not listed, please contact the Office of Law Enforcement for a Designated Port Exemption Permit (form 3-200-2).



Specimen Report

Species360 KKD16-00004

Local ID: MYAKKACLR / 100123

GAN

Eulemur mongoz

Mongoose lemur

Studbooks EAZA, AZA

Order Primates

Family

Lemuridae

IUCN Critically Endangered (CR)

CITES I

Start Date Jan 01, 1800

End Date May 08, 2022

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Basic Animal Information

No Local Data Differences Found

Sex - Contraception	Male -	Status	Alive
Birthdate - Age	Apr 13, 2016 - 6Y,0M,25D	Preferred ID	MYAKKACLR / 100123
Origin	Lemur Conservation Foundation	Rearing	Parent
Birth Type	Captive Birth/Hatch	Hybrid Status	Not Hybrid
Sire	23255476 (MYAKKACLR / 100062)	Dam	KKD14-00240 (MYAKKACLR / 100111)
Current Collection	Main Institution Animal Collection	Collection Trip	
Clutch / Litter		Enclosure	NCR6

Visit History

Date in	Acquisition - Vendor/Local ID	Phy	Own	Reported By	Disposition - Recipient/Local ID	Phy	Own	Date Out
Apr 13, 2016	Birth/Hatch	In	In	MYAKKACLR / 100123		-	-	

Identifiers

Reported By	Effective Date	Type	Identifier	Location	Status	Comments
MYAKKACLR	Apr 03, 2017	Transponder	024*018*263	Interscapular	In-Use	
MYAKKACLR	Jul 06, 2016	House Name	Javier		Active	Leena infant 100123 identified as male, given the name 'Javier'
MYAKKACLR	Apr 14, 2016	Regional Studbook Number	AZA/1294		Active	
AZA	Apr 13, 2016	Regional Studbook Number	AZA/1294		Active	Studbook: Eulemur mongoz
MYAKKACLR	Apr 13, 2016	Local ID	100123		Active	

Sex Information

Reported By	Date	Sex	Comments
MYAKKACLR	Jul 06, 2016	Male	
MYAKKACLR	Apr 13, 2016	Undetermined	

Parent Info

Reported By	In ZIMS	Parent Info	Type / Probability	Birth Date	Comments
MYAKKACLR	Yes	KKD14-00240 [MYAKKACLR / 100111]	Dam/100%	Apr 06, 2012	
MYAKKACLR	Yes	23255476 [MYAKKACLR / 100062]	Sire/100%	Apr 18, 1997	

Ancestry Information (calculated by Species360 from shared data)

% Pedigree Known	% Pedigree Certain	Taxonomic Inconsistencies	No. Identified Ancestors
25.00%	25.00%	No	14

Rearing Information

Reported By	Start Date	End Date	Rearing	Comments
MYAKKACLR	Apr 13, 2016		Parent	

Specimen Report



Species360 SCN17-00289

Local ID: DUKE PRIM / 7269

GAN

Eulemur mongoz

Mongoose lemur

Studbooks EAZA, AZA

Order Primates

Family

Lemuridae

IUCN Critically Endangered (CR)

CITES I

Start Date Jan 01, 1800

End Date

Sep 23, 2022

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Basic Animal Information

No Local Data Differences Found

Sex - Contraception	Male -	Status	Alive
Birthdate - Age	Apr 04, 2017 - 5Y,5M,19D	Preferred ID	DUKE PRIM / 7269
Origin	Duke Lemur Center	Rearing	
Birth Type	Captive Birth/Hatch	Hybrid Status	Not Hybrid
Sire	SCN13-00088 (DUKE PRIM / 7158)	Dam	MIG12-29645969 (DUKE PRIM / 6972)
Current Collection	Main Institution Animal Collection	Collection Trip	
Clutch / Litter		Enclosure	S6.

Visit History

Date in	Acquisition - Vendor/Local ID	Phy	Own	Reported By	Disposition - Recipient/Local ID	Phy	Own	Date Out
Apr 04, 2017	Birth/Hatch	In	In	DUKE PRIM / 7269		-	-	

Identifiers

Reported By	Effective Date	Type	Identifier	Location	Status	Comments
DUKE PRIM	Apr 11, 2018	Transponder	00-07A0-A1B7	Interscapular	In-Use	
DUKE PRIM	Jun 14, 2017	Tag	no collar; young male		Active	
DUKE PRIM	Apr 11, 2017	Regional Studbook Number	AZA/1303		Active	
AZA	Apr 04, 2017	Regional Studbook Number	AZA/1303		Active	Studbook: Eulemur mongoz
DUKE PRIM	Apr 04, 2017	Local ID	7269		Active	
DUKE PRIM	Apr 04, 2017	House Name	Nacho		Active	

Sex Information

Reported By	Date	Sex	Comments
DUKE PRIM	Apr 04, 2017	Male	

Parent Info

Reported By	In ZIMS	Parent Info	Type / Probability	Birth Date	Comments
DUKE PRIM	Yes	MIG12-29645969 [DUKE PRIM / 6972]	Dam/100%	Apr 03, 2010	
DUKE PRIM	Yes	SCN13-00088 [DUKE PRIM / 7158]	Sire/100%	Mar 28, 2008	

Ancestry Information (calculated by Species360 from shared data)

% Pedigree Known	% Pedigree Certain	Taxonomic Inconsistencies	No. Identified Ancestors
		No	

No Rearing Information Found

No Contraception Information Found

No Life Stage Information Found

No Development Milestones Found

Enclosure History

Enclosure Name	Date Moved In	Date Moved Out	Transfer Reason	Comments
S6.	May 03, 2022		Management	move to tour path
F9.9.	Jan 22, 2022	May 03, 2022	Management	separate to avoid breeding
F9.10.	Oct 07, 2021	Jan 22, 2022	Management	companion introduction
F9.9.	Oct 04, 2021	Oct 07, 2021	Management	move to re-pair animals
L3.4-FR1.	Sep 22, 2021	Oct 04, 2021	Maintenance	maintenance issues resolved
L3.4.	Sep 20, 2021	Sep 22, 2021	Maintenance	maintenance in enclosure
L3.4-FR1.	Jul 16, 2021	Sep 20, 2021	Management	release to free-range
L3.4.	Jul 05, 2021	Jul 16, 2021	Maintenance	maintenance in enclosure
L1.2-FR1.	Jun 25, 2021	Jul 05, 2021	Maintenance	maintenance issues resolved
L3.4.	Jun 23, 2021	Jun 25, 2021	Maintenance	maintenance in enclosure
L1.2-FR1.	Jun 11, 2021	Jun 23, 2021	Management	release to free-range
L1.2.	Apr 13, 2021	Jun 11, 2021	Management	general move
L1.4-FR1.	Mar 29, 2021	Apr 13, 2021	Management	release to free-range

Specimen Report: SCN17-00289 | Local ID: DUKE PRIM / 7269

Printed: Sep 23, 2022 08:40 am

Duke Lemur Center

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Species360 ZIMS version 2.25.5

Specimen Report



Species360 PQD13-00453

GAN

Eulemur mongoz

Mongoose lemur

Studbooks EAZA, AZA

Order Primates

Family

Lemuridae

IUCN Critically Endangered (CR)

CITES I

Start Date Jan 01, 1800

End Date May 10, 2022

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Basic Animal Information

No Local Data Differences Found

Sex - Contraception	Female -	Status	Alive
Birthdate - Age	Mar 30, 2012 - 10Y,1M,10D	Preferred ID	
Origin	Sacramento Zoo	Rearing	
Birth Type	Captive Birth/Hatch	Hybrid Status	Not Hybrid
Sire	23022499 (SACRAMNTO / 101052)	Dam	27965940 (MYAKKACLR / 100065)
Current Collection		Collection Trip	
Clutch / Litter		Enclosure	

Visit History

Date in	Acquisition - Vendor/Local ID	Phy	Own	Reported By	Disposition - Recipient/Local ID	Phy	Own	Date Out
Mar 30, 2012	Birth/Hatch	In	In	SACRAMNTO / 101145	Donation To PHILADELP/105141	Out	Out	Nov 05, 2014
Nov 06, 2014	Donation From SACRAMNTO/101145	In	In	PHILADELP / 105141		-	-	

Identifiers

Reported By	Effective Date	Type	Identifier	Location	Status	Comments
PHILADELP	Nov 06, 2014	Local ID	105141		Active	
PHILADELP	May 01, 2012	House Name	Natasha		Active	
SACRAMNTO	May 01, 2012	House Name	Natasha		Active	
SACRAMNTO	Apr 16, 2012	Regional Studbook Number	AZA/1272		Active	
SACRAMNTO	Mar 30, 2012	Local ID	101145		Active	
AZA	Mar 30, 2012	Regional Studbook Number	AZA/1272		Active	Studbook: Eulemur mongoz
PHILADELP	Mar 30, 2012	Regional Studbook Number	AZA/1272		Active	
SACRAMNTO	Oct 04, 2012	Transponder	0006E6F50B	Interscapular	In-Use	

Sex Information

Reported By	Date	Sex	Comments
PHILADELP	Nov 06, 2014	Female	
SACRAMNTO	Mar 30, 2012	Female	

Parent Info

Reported By	In ZIMS	Parent Info	Type / Probability	Birth Date	Comments
SACRAMNTO	Yes	27965940 [MYAKKACLR / 100065]	Dam/100%	Apr 19, 2009	
SACRAMNTO	Yes	23022499 [SACRAMNTO / 101052]	Sire/100%	Apr 03, 2002	

Ancestry Information (calculated by Species360 from shared data)

% Pedigree Known	% Pedigree Certain	Taxonomic Inconsistencies	No. Identified Ancestors
81.25%	81.25%	No	28

No Rearing Information Found

No Life Stage Information Found

Specimen Report



Species360 HYK19-10210

GAN

Eulemur mongoz

Mongoose lemur

Studbooks EAZA, AZA

Order Primates

Family

Lemuridae

IUCN Critically Endangered (CR)

CITES I

Start Date Jan 01, 1800

End Date May 10, 2022

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Basic Animal Information

No Local Data Differences Found

Sex - Contraception	Female -	Status	Alive
Birthdate - Age	Jun 07, 2019 - 2Y, 11M, 3D	Preferred ID	
Origin	Philadelphia Zoo	Rearing	Parent
Birth Type	Captive Birth/Hatch	Hybrid Status	Not Hybrid
Sire	SCN12-00006 (PHILADELP / 105140)	Dam	PQD13-00453 (PHILADELP / 105141)
Current Collection		Collection Trip	
Clutch / Litter		Enclosure	

Visit History

Date in	Acquisition - Vendor/Local ID	Phy	Own	Reported By	Disposition - Recipient/Local ID	Phy	Own	Date Out
Jun 07, 2019	Birth/Hatch	In	In	PHILADELP / 105445		-	-	

Identifiers

Reported By	Effective Date	Type	Identifier	Location	Status	Comments
PHILADELP	Aug 16, 2019	House Name	Zoe		Active	
AZA	Jun 07, 2019	Regional Studbook Number	AZA/1317		Active	Studbook: Eulemur mongoz
PHILADELP	Jun 07, 2019	Local ID	105445		Active	

Sex Information

Reported By	Date	Sex	Comments
PHILADELP	Jun 07, 2019	Female	Keeper S. Bierly reported on 13AUG19 that #105445 is likely female, as this lemur's fur coloration is consistent with that of female mongoose lemurs.

Parent Info

Reported By	In ZIMS	Parent Info	Type / Probability	Birth Date	Comments
PHILADELP	Yes	PQD13-00453 [PHILADELP / 105141]	Dam/100%	Mar 30, 2012	
PHILADELP	Yes	SCN12-00006 [PHILADELP / 105140]	Sire/100%	Apr 09, 2012	

Ancestry Information (calculated by Species360 from shared data)

% Pedigree Known	% Pedigree Certain	Taxonomic Inconsistencies	No. Identified Ancestors
		No	

Rearing Information

Reported By	Start Date	End Date	Rearing	Comments
PHILADELP	Jun 07, 2019		Parent	

No Life Stage Information Found



September 26, 2022

To Whom It May Concern:

The Mongoose Lemur (*Eulemur mongoz*) Yellow Species Survival Plan (SSP®) of the Association of Zoos and Aquariums officially recommends the transfer of two pair of mongoose lemurs, *Eulemur mongoz*, from Duke Lemur Center, Durham, North Carolina, USA to the NaturZoo Rheine, Rheine, Germany and Tierpark Berlin, Berlin, Germany. Both NaturZoo Rheine and Tierpark Berlin have an extensive history in lemur husbandry and supporting lemur conservation in Madagascar and these lemurs will be joining the formally managed European Endangered Species Program (EEP) of EAZA. The identification of the four mongoose lemurs that will be exported from the SSP are as follows:

1. Male, AZA Studbook #1294, "Javier", ZIMS GAN: KKD16-00004
2. Female, AZA Studbook #1271, "Natasha", ZIMS GAN: PQD13-00453
3. Male, AZA Studbook #1303, "Nacho", ZIMS GAN: SCN17-00289
4. Female, AZA Studbook #1317, "Zoe", ZIMS GAN: HYK19-10210

Mongoose lemurs are currently listed as Critical in the wild by IUCN and are one of the species recommended for *ex situ* global management by the "Lemur of Madagascar: A Strategy for their Conservation 2013-2016" (Schwitzer et al. 2013). Sending this pair of lemurs to Europe will be a first step in global collaboration and population management for this species, with the aim of improving reproduction in multiple regions so that more regular exchanges of animals between Europe, the US, and even Madagascar, can occur in the future, as has already been demonstrated to be successful with other lemur species.

I have shared pedigree and genetic data with the European region, and we have determined that these lemurs are unrelated to the European population, and thus these they will be both a valuable genetic and demographic addition to the EEP population. Currently, these animals are over-represented in the SSP population, and are also represented in the SSP population by other full siblings or offspring who will be available to breed in the SSP population when needed.

Please do not hesitate to contact me if any additional information is required about this export or the Mongoose Lemur Yellow SSP.

Best,

Gina M. Ferrie
Mongoose Lemur Yellow SSP Coordinator
Prosimian TAG Vice Chair
Disney's Animal Kingdom
Gina.M.Ferrie@disney.com
407-222-0124

Technical Expertise & Facilities, Question 15: CVs for Tierpark Berlin husbandry and management staff

Curriculum vitae

Dr. Andreas Pauly

Personal Status

Birthday:

Place of birth:

Nationality:

Address:

Telephone:

Fax:

Email:

Education

2017	Veterinary specialist for zoo animals
2003	Dr. med. vet., Faculty of Veterinary Medicine, Free University of Berlin, entitled: „ <i>Molekulare Charakteristik von adulten Trematoden der Familie Opisthorchiidae mittels PCR und RFLP-Analyse. Mit einem Beitrag zum molekularen Nachweis von Eiern der Arten Opisthorchis felineus (Rivolta, 1884) und Metorchis bilis (Braun, 1790) im Kot von Füchsen.</i> “
2001	Veterinary registration
1995 - 2001	Study of veterinary medicine, Free University of Berlin
1995	Intermediate diploma of biology, University of Saarland
1992 – 1995	Study of biology; University of Saarland

Employment

2005- Curator of primates at Tierpark Berlin-Friedrichsfelde

2003- Fulltime Veterinarian at Tierpark Berlin-Friedrichsfelde

Curriculum vitae

Axel Oberländer

Personal Status

Birthday:

Place of birth:

Nationality:

Address:

Telephone:

Fax:

Email:

Education

2000	Dipl.-Ing. (FH) for wood technology
1995 - 2000	Study of wood technology, University of Applied Sciences, Eberswalde
1988	Zoo keeper
1986 - 1988	Vocational training for zoo keeper

Employment

2015-	Vice head keeper, primate section at Tierpark Berlin
2008-	Primate keeper at Tierpark Berlin
2003-	Zoo keeper at Tierpark Berlin
2002 – 2003	Management assistant, Thüringer Möbelteile GmbH
2000 – 2001	Facility manager /- technician, Strähle Raum-Systeme Borkheide GmbH
1990 – 1995	Zoo keeper at Tierpark Berlin

Curriculum vitae

Ute Jany

Personal Status

Birthday:

Place of birth:

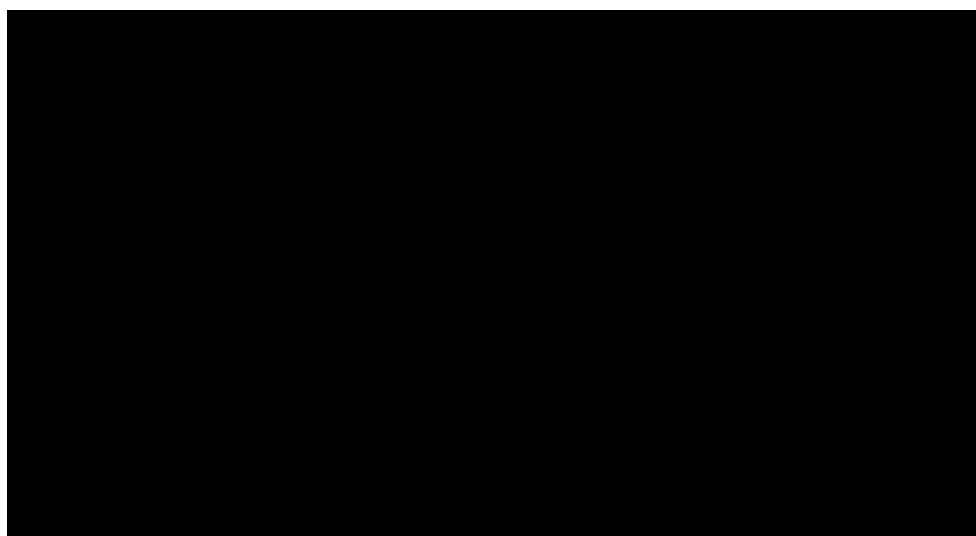
Nationality:

Address:

Telephone:

Fax:

Email:



Education

1983

Zoo keeper

1981 - 1983

Vocational training for Zoo keeper at Tierpark Berlin

Employment

2015 -

keeper primate section at Tierpark Berlin

2013 - 2015

head keeper primate section at Tierpark Berlin

1986 – 2013

keeper primate section at Tierpark Berlin, especially lemurs

Curriculum vitae

Nils Frankenfeldt

Personal Status

Birthday:

Place of birth:

Nationality:

Address:

Telephone:

Fax:

Email:

Education

2012 Zoo keeper

2009- 2012 Vocational training for Zoo keeper at Tierpark Berlin

Employment

2015 - keeper at the animal hospital and quarantine section at Tierpark Berlin

2013 - keeper primate section at Tierpark Berlin

2012 - 2013 Zoo keeper at Tierpark Berlin (Children's Zoo)

Curriculum vitae

Fabian Behnke

Personal Status

Birthday:

Place of birth:

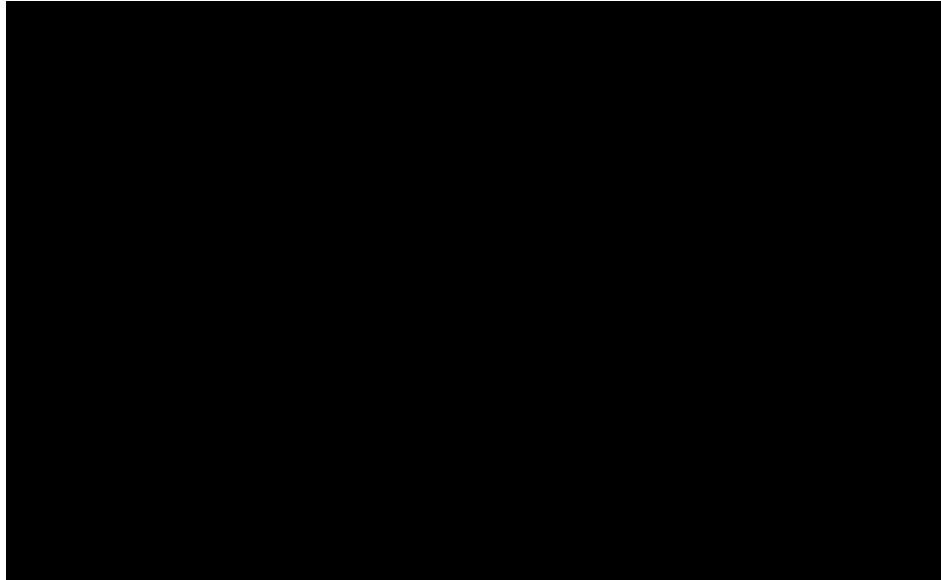
Nationality:

Address:

Telephone:

Fax:

Email:



Education

2011 Zoo keeper

2008- 2011 Vocational training for Zoo keeper at Tierpark Berlin

Employment


2010 - keeper primate section at Tierpark Berlin

Incomplete Application - CITES/ESA CS0089413

Lamberson, Amanda M <amanda_lamberson@fws.gov>

Thu 6/15/2023 3:34 PM

To: amanda.mazza@duke.edu <amanda.mazza@duke.edu>

 1 attachments (430 KB)

3-200-37a_CITES_ESA_import_export_re-export_Live_animals_v3(508).pdf;

Dear Amanda,

Thank you for your application for a U.S. CITES/ESA export permit. However, your application is incomplete. The following is the information that is still needed. Please note, question numbers I specify correspond to those as listed in the official Section E form and may not match those in the word document application form submitted. I have attached the official Section E form for your reference.

- Please provide documents on transfer of ownership or transaction agreements with the Philadelphia Zoo and Lemur Conservation Foundation for lemurs 1317, 1271, and 1294. Also, please verify studbook # 1271 is correct. The Species 360 report that appears to correspond with this animal lists studbook # 1272.
- For lemur 1317, I noticed a microchip/transponder or tattoo number was not specified. It is advisable for the animal to have some form of physical identification that can be used by the port inspectors unless there is a particular reason this cannot be done. Otherwise this may cause issues or delays during inspection.
- For question 13. a., please provide further description of how the lemurs will be propagated.
- Please provide documentation showing participation in an established breeding program (example: current breeding plan outlining your role in the program). A letter from breeding coordinator alone is not sufficient.
- Answer question 13.c. This may be information provided in the documentation of participation in an established breeding program.
- Question 14. Please provide more detailed and specific information on how Tierpark Berlin supports AEECL and how such continued participation has likely reduced the threat of extinction specifically of the species *Eulemur mongoz* [50 CFR 17.22(a)(2)(iv)].
- Answer Question 16. And 21.
- As *Eulemur mongoz* is a CITES Appendix I listed species, a CITES import permit is required before the corresponding CITES export permit may be issued. You will need provide a copy of the issued CITES import permit from Germany or evidence one will be issued by the German CITES Management Authority.

While the import permit is necessary for the export permit to be issued, I would advise you to prioritize the other information first. We will need all of the other information before we can submit this application to the Federal Register for 30 day public comment, as is required for all import/export applications for ESA listed species. The other exception is the physical identification. Unless lemur 1317 has a current microchip/transponder or if the decision is made to microchip the lemur, that number can be provided later. Please let me know if you have any questions or need clarification. Thank you.

In accordance with 50 CFR 13.11(e), if the requested information is not received by this office within 45 calendar days of the date of this email, your application will be abandoned and administratively closed. Once a file is closed, you will need to submit a new application, and all required fees, for the Service to consider your proposed

activity.

Kind regards,

Amanda Lamberson
Biologist
U.S. Fish and Wildlife Service
Division of Management Authority
Branch of Permits, MS: IA
5275 Leesburg Pike
Falls Church, VA 22041



IMPACT Madagascar

IMPlimenting ACTions for sustainable environmental change in
Madagascar through local community-led conservation initiatives

Annual Report 2022



Introduction

Madagascar has a unique and exceptional biodiversity; 80% of the fauna and flora are endemic to the island. Since their arrival, humans have depended on Madagascar's natural resources for food, shelter, and well-being. As Madagascar's population grows, and climate change accelerates environmental degradation, conservation efforts in the country are increasingly vital to human and animal survival.

Since its creation in 2014, IMPACT Madagascar has been working in five regions of the country to preserve and restore biodiversity while taking into account the people who depend on it. IMPACT works with local people to provide solutions to the problems of deforestation, pollution and poverty through various projects including:

Natural resource conservation with communities

Biodiversity & habitat monitoring, patrols,
reforestation and ecological restoration

Community development

Environmental education

Community health

Scientific research

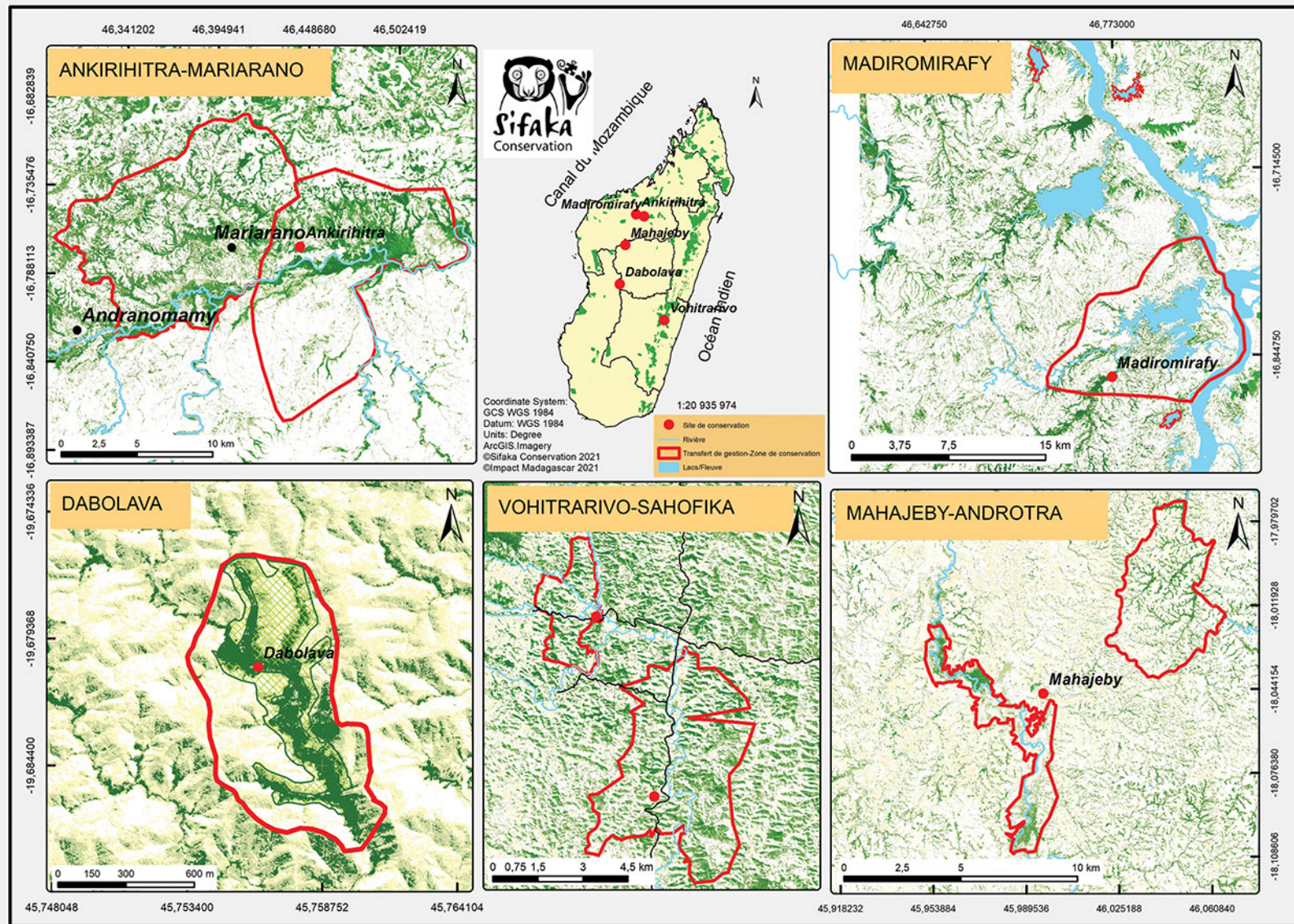
Our team works with communities to empower them and support them in the sustainable management of their local natural resources.

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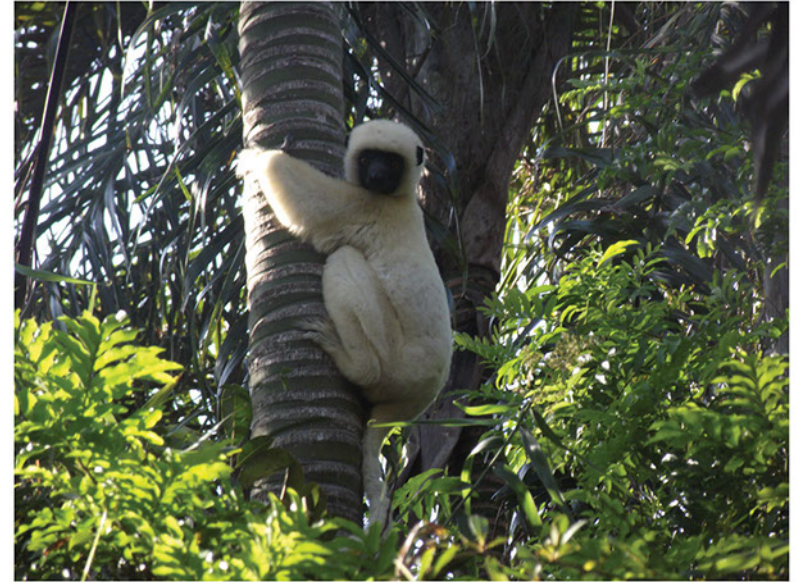
Our Intervention Sites



Western Sifaka in Madagascar



Coquerel's sifaka



Decken's sifaka



Crowned sifaka

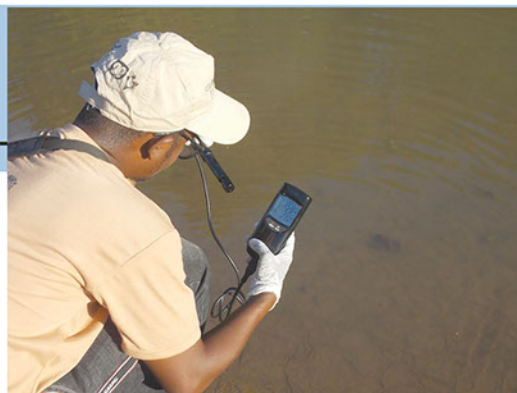
ANKIRIHITRA SITE

The site of Ankirihitra constitutes one of the last vestiges of forest resources in the Boeny region, Ambatoboeny district. It is home to countless endemic fauna of Madagascar including lemurs and other fauna such as birds, small mammals, reptiles, amphibians and fish. These fauna take refuge in the gallery forests along the labohazo River, the dry deciduous forests, as well as the streams and rivers surrounding the gallery forests.

Two community conservation associations (VOIs) work hard to manage these resources to conserve the critically endangered and endangered species on the IUCN Red List of Species found there.

This site is also part of the new Protected Area we are establishing.

- Our nursery produced 65,000 seedlings (from 27 plant species) for the 2022/23 tree-planting season
- 24,000 seedlings were planted overall, restoring an area of 10.50 ha.
- 150 students participated in our environmental education program, and 86 students visited the forests.



7300 patrol-efforts were carried out in a total area of 6,564 ha of forests.

Like many special reserves in Madagascar, our resources were not spared from fire this year, but thanks to patrols and new approaches adopted, the fires were controlled in time and the conservation areas were not affected.

In view of this, we've reinforced awareness of brushfire hazards. 12 awareness-raising sessions were conducted and reached more than 1570 villagers.

- **268 lemurs from 4 species were inventoried at the site, including 145 Crowned Sifaka (*Propithecus coronatus*)**

This year, a survey was conducted to identify potential sites for the wetland wildlife conservation program. **Critically endangered endemic species are present**, namely the Madagascar big headed turtle (*Erymnochelys madagascariensis*), Madagascar Fish eagle (*Haliaeetus vociferoides*) and cichlid fish (*Paretroplus spp*).

For the first time, physico-chemical parameter surveys were carried out in 7 wetlands, showing good water quality overall.



ANKIRIHITRA SITE

248 smallholder beneficiaries participated in development activities this year, including **irrigated rice cultivation, market gardening, beekeeping and poultry breeding**. Seeds, agricultural equipment and beekeeping equipment were distributed.



Our smallholder beneficiaries produced:

7919.5 kg of leafy vegetables
577 kg of cucumber
448 kg of zucchini
80 kg of cabbage
83.5 kg of onions
649kg of tomatoes
584 poultry
59 tons of paddy (2.61 tons per Ha)

The products were sold for income, and also consumed by the beneficiaries and their families.

Beekeeping is still in progress. We should see our first honey production in 2023.

An irrigation system at the Ankirihitra site has been constructed to provide water for over 10 Ha of agricultural area.



MADIROMIRAFY SITE

The Madiromirafy site, located in the Betsiboka region, Maevatanana district, is home to a dry gallery forest and a complex aquatic ecosystem hosting a multitude of unique flora and fauna species.

One of the particularities of this site is the presence of endemic and threatened species, classified as **critically endangered** by the IUCN red list, namely Crowned sifaka, Madagascar fish eagle (*Haliaeetus vociferoides*), Madagascar big-headed turtle (*Erymnochelys madagascariensis*), and the Spotted Damba Cichlid fish (*Paretroplus maculatus*). IMPACT Madagascar works hard to protect this exceptional biodiversity.

This site is currently part of the New Protected Area that we are creating.

612 patrols were carried out, covering an area of over 400 Ha.

Illegal cutting, charcoal burning, overexploitation of fisheries resources and the use of illegal fishing gear are the greatest threats to terrestrial and aquatic biodiversity at this site. Patrols of this forest area resulted in the arrest and subsequent prosecution of two illegal charcoal makers.



- 63,000 tree seedlings (from 13 plant species) were produced at the Madiromirafy site nurseries for the 2022/23 tree planting season.
- 63,280 seedlings have been planted in the restoration zone and on the adjacent islands, covering an area of 8 ha.

- A total of 162 Crowned sifaka from 32 groups, and 9 red-fronted brown lemurs from one group, were inventoried in the Mandrava forest.
- The inventory of lake ecosystems showed more than 9 species of fish, more than 760 birds, 2 pairs of fish eagles and 1 fish eagle chick that also depend on these resources.



The populations at the intervention site benefited from a community health program, thanks to HOVERAID's MMS project. **About 425 villagers had access to free health care.**

Awareness raising was carried out this year on the importance of reforestation, bushfire control and the closure of the fishing season. More than 1276 villagers attended these activities.

MADIROMIRAFY SITE



601 smallholders from 7 villages in the Madiromirafy site have benefited from the organization's support for community development activities

Seeds, ducklings and agricultural materials were distributed, and we also provided appropriate training.

Our beneficiaries produced:

2083.5 kg of leafy vegetables
853kg cucumber
517kg zucchini
43kg bell pepper
65.50kg onion
611kg tomato
29.38 tons of peanuts (1.01 tons per Ha)
13.60 tons of mung beans
73.17 tons of corn (1.66 tons per Ha)
11.56 tons of paddy

Rainfed rice has long been a source of food for villagers during the lean season. Unfortunately, the crop suffered considerable damage this year from cyclones. Only a few beneficiaries had harvests. **To cope with this disaster, food subsidies were provided. 569 households were able to benefit.**

DABOLAVA SITE

The discovery of Crowned Sifakas in the Amboloando forest in 2009 by our team led to the creation of the Dabolava conservation site.

This site, located in the Menabe region, Miandrivazo district, is very important because it is the southern limit of the geographical distribution of the crowned sifaka in the central western part of Madagascar.

Conservation activities are continuing by increasing the habitable reforested area to ensure the survival of the Crowned Sifaka population in a restricted and threatened habitat.

- 2.50 ha of degraded areas were restored by planting 13,000 seedlings.
- A production of 16,495 seedlings from 12 tree species was made at the Amboloando nursery for the 2023 reforestation. In addition, IMPACT Madagascar also established the VOI RIANALA nursery, intended for the production of 3 000 seedlings.



105 patrols were conducted, covering 94.50 ha of forest.

18 individuals of Crowned sifaka from 4 groups were counted, including two (2) newborns.

A new group of Crowned Sifaka was created. The new pair currently occupies a part of the habitat that has not been used for a long time but has undergone a vegetation evolution following restoration. The creation of this fourth group will hopefully contribute to an increase of birth rate in 2023.



Since bushfires are the most feared threat to natural resources in this area, 18.50 km of firebreaks and firewalls have been installed around the forests to protect them.

DABOLAVA SITE

Technical and material support was provided this year at the site for villagers' agricultural and livestock activities.

97 farmers were able to benefit.



The villagers' crops were affected by a locust invasion in late 2022. **IMPACT Madagascar provided support in teaching farmers how to mechanically control these insects and alert and conduct on-site locust control services.** The evolution of these locusts is being closely observed by our teams.

Our beneficiaries produced:

52.27 tons of paddy with rainfed and irrigated rice crops.
16.43 tons of corn
171 poultry

A large part of the production was consumed, the remainder were sold and/or used as seeds for the next growing season.



MAHAJEBY SITE

A site in the central domain bordering the western zone, Mahajeby is the only remnant forest in the central domain that supports a critically endangered lemur species, the Crowned sifaka, and other biodiversity.

This site is important and potential for the conservation of species of both terrestrial and wetland ecosystems due to the richness of specific diversity that it harbors.



- 61,621 seedlings were planted in the restoration and reforestation areas as well as in the beneficiaries' plots. The total surface of the restored and reforested areas is 33.24 ha.
- 107,500 seedlings (from 10 tree species) were produced in the nursery to supply reforestation and restoration sessions for 2023



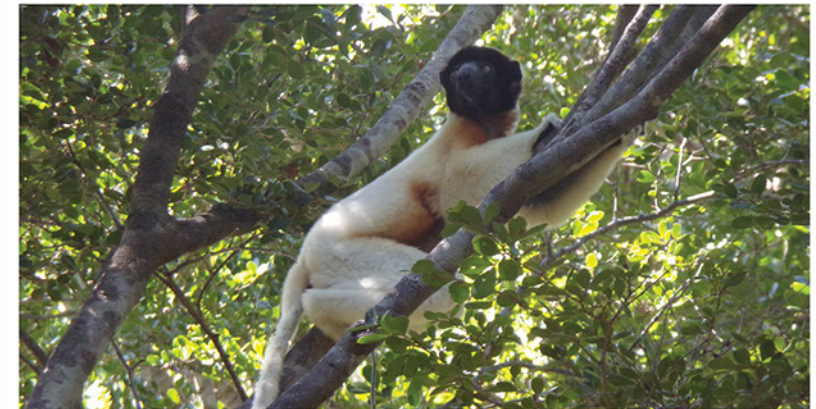
A total of 754 patrols were carried out, covering an area of 1188 ha.

The contract for the natural resources community management (forests and wetlands) at this site has been renewed for 10 years.



83 individuals of Crowned Sifaka were counted. A decrease of pressures and threats on the habitat was observed, at the rate of 23% compared to last year. The main threats to these resources are grazing, logging and brushfire

1 km of firebreaks have been constructed to protect the conservation areas.



IMPACT conducted a data collection survey of the Mahajeby wetlands.

Overexploitation remains the greatest threat to the sustainability and proper management of fisheries resources.

The lake faces immense pressures, despite its great biological, socio-economic and cultural value, and we're pleased to announce that preparations for its restoration have begun.

MAHAJEBY SITE

IMPACT Madagascar helped provide a solar light kit for the community hospital, to improve working conditions for medical staff, and to provide quality medical care for local people.



The rural commune of Mahajeby has started to build a marketplace to improve and increase produce sales for local farmers. IMPACT Madagascar has contributed to the construction of one of the market stalls.

This year, our patrol guides are in their third year of participation in the **Wildlife Ranger Challenge!** Composed of 8 patrollers, Sifaka team and Fosa team ran a half-marathon, covering a distance of 21 km in 3 hours 31 min with over 22kg of gear. Our teams are proud to be the only Ranger teams hailing from Madagascar! The Wildlife Ranger Challenge is organized annually by Tusk Trust.

439 farmers were able to benefit from our support in 2022, despite the remote location of this site. We are working on improving access for all.

Our beneficiaries produced:

158 tons of paddy
649 kg of angivy
58900 kg of leafy vegetables
643 kg of carrot
3320 kg of cabbage
6745 kg of cucumber
2980 kg of zucchini
2030 kg of onion
660 kg of bell pepper
16420 kg of tomatoes



This year, Mahajeby beneficiaries participated in an **economic fair in Tsiroanomandidy.** With the support of the IMPACT Madagascar, they were able to exhibit their local products and promote their area by presenting the importance of their villages, including the presence of a conservation site for Crowned sifaka. More than 500 visitors were able to visit their booths, and economic actors have made contact with them.

VOHITRARIVO SITE

Located in the south-eastern part of Madagascar, in the Vatovavy region; Vohitrarivo, Sahofika and Ambodigoavy are particularly well known as conservation sites for large haplemurs such as the Greater bamboo lemur (*Prolemur simus*) outside of national parks.

Management of natural resources is being transferred to community conservation associations or VOI thanks to the technical and financial support of HELPSIMUS and IMPACT Madagascar.

This site is important for biodiversity conservation.



- 11515 seedlings have been planted in the restoration area of the 3 VOI's and in the beneficiaries' plots. A total area of 5 ha has been restored.
- At the end of the year 2022, 46,759 seedlings (from 27 tree species) have been produced in the 3 nurseries.

288 patrols were carried out, covering a total area of 2636 ha.

Illegal cutting and *tavy* (slash-and-burn land clearing) remain the primary threats to biodiversity in this area.

VOHITRARIVO SITE

In partnership with HELPSIMUS Association, a school canteen program has been set up at five schools at the site to feed the children during school days so that hunger does not constitute a blocking factor to their studies. During the 2021-2022 school year, 67,896 meals were served.



A rice paddy monitoring program was managed by IMPACT starting this fiscal year. It aims to prevent the Greater bamboo lemur (*Prolemur simus*) from destroying villagers' crops. In the first half of the year, more than 672 plots of crops belonging to 131 beneficiaries in 15 zones were guarded from April to June 2022. During the second semester, 19 areas have been monitored since November.

Our site, located in the Vatovavy region, was victim of the passage of cyclones ANNA, BATSIRAI and EMNATI this year. 138 houses and school documents were destroyed; infrastructures were weakened, several crops were ravaged. We lost 4200 seedlings in our site nurseries and 384 in reforested areas. 7 fish ponds were also cracked. Several months after the cyclones, the villagers can still feel their negative impact in their daily lives. **Subsidies have been provided for food, seeds, blankets, and construction supplies.**

Support was provided for market gardening, bean farming, rice cultivation and fish farming, benefitting 717 households.

Our beneficiaries produced:

More than 11150kg of leafy vegetables

1515kg of angivy

2890kg of carrot

5060kg of cucumber

1492kg of zucchini

4049kg of cabbage

1752kg of green bean

927kg of tomato

More than 5 tons of dry beans (1.04 tons per Ha)

More than 71 tons of paddy were harvested

2734 fish consumed and sold; more than 39,449 fry produced by breeding.

Two irrigation systems, in Sahandrazana and Ambohipo, were constructed, benefitting 37 households. A total of 6.75 ha of rice fields are now irrigated.



Ambohijanahary Special Reserve

Last year, IMPACT Madagascar launched an expedition to inventory the western portion of Ambohijanahary forest, located in the Menabe and Melaky regions.

In 1958, the reserve occupied a total area of 24,750 ha, but in 2022, after years of threats and pressures (illegal hunting and logging, *favy* -- slash-and-burn land clearing -- and human penetration) ...only 7,000 ha of forest remain.

This is a 71% decrease in the total area of the reserve in 60 years, and its speed is alarming. This site harbors a unique biodiversity and serves important ecological purposes for local communities.

IMPACT Madagascar is currently seeking to raise funds in order to run conservation and community development activities for the area.

Please support our efforts via our website-

IMPACTmadagascar.org/support-us



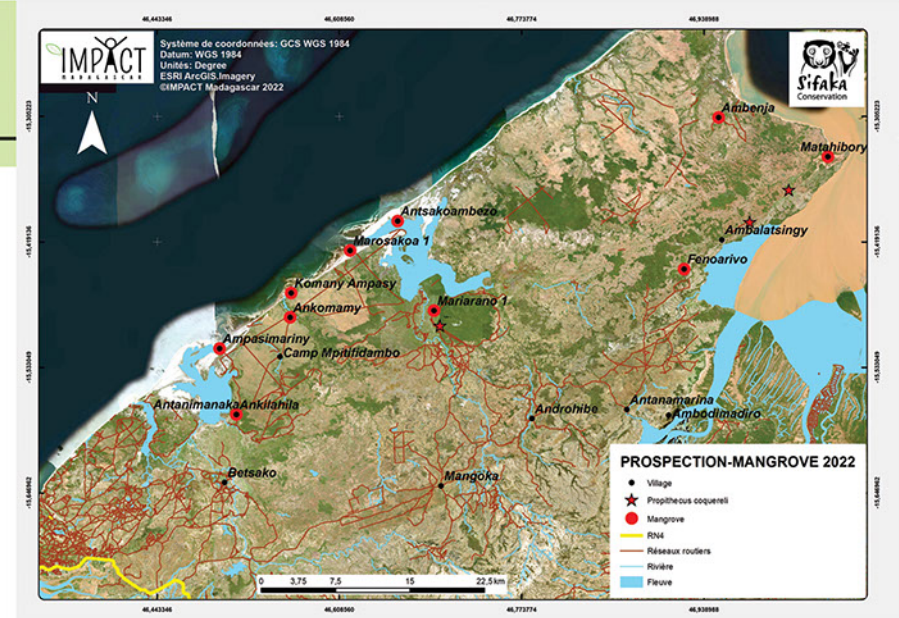
The floristic and faunistic inventory of the reserve shows the presence of:

- 38 Von der Decken's sifaka (*Propithecus deckeni*), belonging to 13 groups
- 6 species of Madagascar Poison Frogs (*Mantellidae*)
- 7 species of reptiles
- 6 species of mammals
- Over 78 species of vascular plants belonging to 44 botanical families, of which 33 species are on the IUCN red list

Survey in Mariarano & Betsako

This year, we started to explore potential coastal and mangrove sites in Majunga II, the communes of Mariarano and Betsako. 10 sites were visited, 6 of which have VOIs established managing natural resources. Our goal is to create an additional 4 VOIs to protect and manage sustainably the natural resources.

Conservation targets include *Propithecus coquereli*, *Eulemur fulvus*, *Eulemur mongoz*, *Cheirogaleus medius*, *Lepilemur edwardsi*, *Microcebus murinus*, *Microcebus ravelobensis*, *Phaner pallescens* and *Avahi occidentalis*.



Western Sifaka Research Project

IMPACT Madagascar began a research project on Crowned sifaka and Coquerel's sifaka in the Boeny region. This project focuses on the study of the ecological niche of these two species and their implication in conservation.



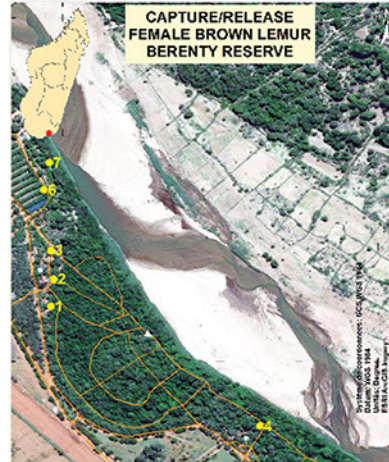
A fauna inventory was conducted which allowed us to obtain preliminary data regarding lemur population density in the area. A flora inventory allowed us to describe the habitat characteristics in each zone and their regeneration rates. A phenological survey was started on trees fed by the sifaka species. Two groups of each sifaka species are being followed during these behavioral ecology studies.

If you are interested in joining or learning more about our research, please contact us via our website.

Berenty Reserve / Ringtailed Lemur Project

IMPACT Madagascar monitored ringtailed and Brown lemur populations at Berenty Reserve, where introduced brown lemurs are in competition with the ringtailed lemurs. Our teams completed the sterilization of 15 female brown lemurs from 7 groups in the reserve, without issue. This is the first time this procedure has ever been done.

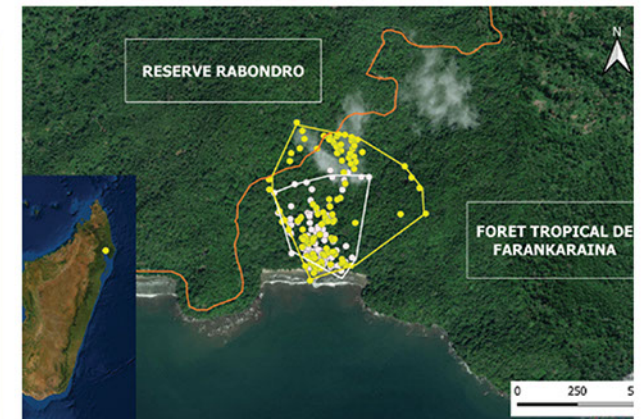
We will continue to assess the ecological interactions between these two species, as well as the efficacy of sterilization as a method of reducing competition between species.



Red Ruffed Lemur Project



Our teams continue to monitor 8 Red Ruffed Lemurs (*Varecia rubra*) from 2 groups, released into the Farankaraina Reserve. Currently, both groups are adapting extremely well, ranging respectively in an area of roughly 12 to 28 Ha.

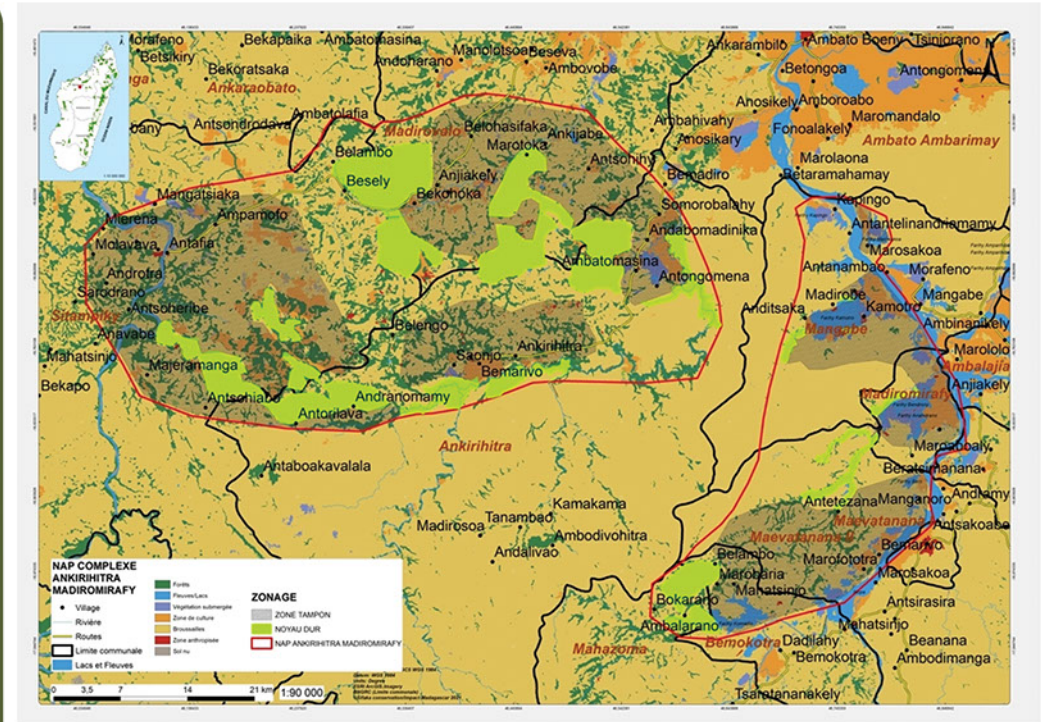


New Protected Area (Ankirihitra - Madiromirafy)

Great progress has been made towards the creation of a new protected area thanks to the support of Re:Wild, The Ellen Fund, and Rainforest Trust.

A meeting of the SAPM (Protected Area System in Madagascar) commission was held. It highlighted the eligibility and admissibility of the documents prepared by the IMPACT Madagascar for the creation of the NPA Madiromirafy-Ankirihitra. The organizations, partners and actors working in the field of conservation present at the meeting unanimously agreed on the usefulness of the establishment of this new protected area. Following the meeting of the commission, the MEDD (Ministry of Environment and Sustainable Development) issued their favorable opinion for the IMPACT Madagascar to continue the processes related to the creation of the NPA Madiromirafy-Ankirihitra. Another subsequent meeting was held with the authorities of the Boeny region to communicate the expansion of the conservation program via the NAP. They fully support the project.

The proposal for a temporary protection order has been submitted to the MEDD (Ministry of Environment). The conservation activities on the proposed protected area will continue while waiting for the temporary decree for the new protected area, expected by the end of 2023.



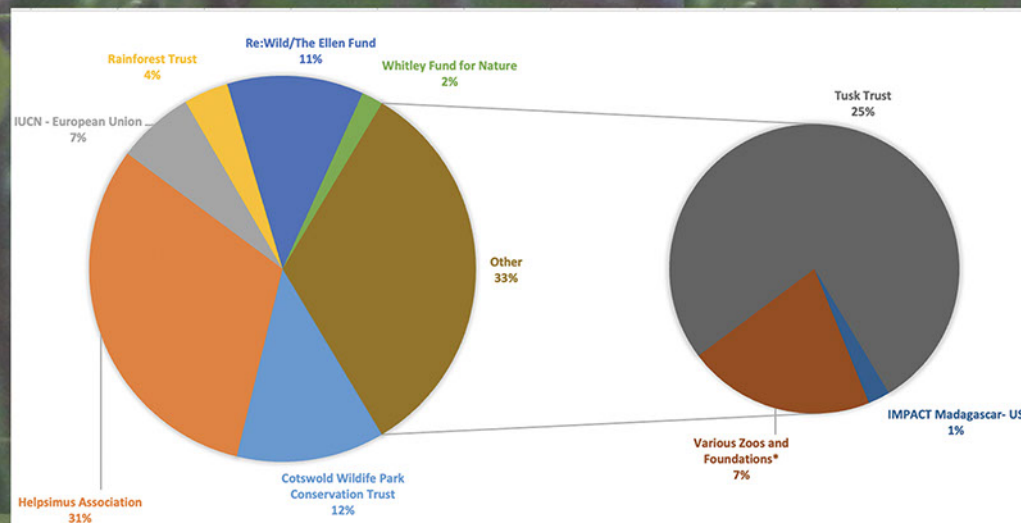
Our team is honored to have a visit from a potential partner, Rainforest Trust, to assess with us the biodiversity of the site, and the urgent need for its conservation.

A research and ecotourism camp is being constructed at the Madiromirafy site.

2022 Annual Totals (compared with 2021)

	2022	2021
Number of Patrol days	1,933	1,535
Number of saplings produced in the tree nurseries	298,754	203,565
Number of planted saplings	173,347	154,986
Surface restored/reforested (Ha)	59	54
Number of participants in tree planting events	5,114	4,423
Number of crowned sifaka counted	408	332
Number of beneficiaries (Smallholders)	2,102	3,430
Rice paddy produced (tons)	351.83	255.45
Corn produced (tons)	89.60	89.11
Peanuts produced (tons)	29.38	9.38
Mung beans produced (tons)	13.60	-
Beans produced (tons)	5.00	3.96
Poultry consumed and/or sold	2,845	747
Fish produced, consumed and/or sold	2,734	131
Amount of vegetables produced (tons)	135.11	95.24

2022 Financial Statement



*Apenheul Primate Conservation Trust, Besancon Museum, Curraghs Wildlife Park, Heidelberg Zoo, La Palmyre Zoo, Mulhouse Zoo, and Tierpark Berlin

	Amount in MGA	Amount in USD
Total Funds received 2022*	1,508,208,669.40	350,746.20
Expenditure		
Operational costs	132,322,740.00	30,772.73
Activity costs	1,155,780,991.69	268,786.28
<i>Expeditions and Regional Biodiversity events and Celebrations</i>	18,305,500.00	4,257.09
<i>Activities in Vohitrarivo</i>	406,828,100.00	94,611.19
<i>Activities in Ankirihitra</i>	175,862,300.00	40,898.21
<i>Activities in Madiromirafy</i>	101,355,250.00	23,570.99
<i>Activities in Mahajeby</i>	99,664,100.00	23,177.70
<i>Activities in Dabolava</i>	45,383,900.00	10,554.40
<i>Lemur research in Berenty</i>	20,870,300.00	4,853.56
<i>Creation of New protected Area Ankirihitra-Madiromirafy</i>	60,803,600.00	14,140.37
<i>Joint activities for Ankirihitra, Madiromirafy and Mahajeby (IUCN)</i>	97,304,641.69	22,628.99
<i>Infrastructures and Camp</i>	129,403,300.00	30,093.79
Personnel Costs	177,340,600.00	268,786.28
<i>Personnel salaries , Fringes on salaries, social charges and insurance</i>	177,340,600.00	41,242.00
Total Expenses 2022 (USD)	1,465,444,331.69	340,801.01
Remaining balance as of December 31st, 2022	42,764,337.71	9,945.19
*Specific funds for Land purchase (from Helpsimus Association) and Continuation Funding 2023 not included		

In the upper left is a chart showing where our funding comes from based on the donors and the percentage of our total received funds.

In the lower left is a table of our annual expenditures.

A SINCERE THANK YOU TO OUR DONORS AND PARTNERS!
Without you, none of this would be possible.

DONORS



PARTNERS





www.IMPACTmadagascar.org



@impactmadagascar



@impactmada



@impact_mada

Re: [EXTERNAL] RE: Incomplete Application - CITES/ESA CS0089413

Lamberson, Amanda M <amanda_lamberson@fws.gov>

Wed 6/21/2023 3:32 PM

To:Amanda Mazza <amanda.mazza@duke.edu>

Good afternoon Amanda,

Thank you for the additional information.

The IMPACT report is useful supporting documentation, however it is broad and I am still needing a more specific statement on how Tierpark Berlin's support of this organization has or will likely reduced the threat of extinction to Eulemur mongoz. This should include how much they are contributing, for how long, and ways in which those funds may directly or indirectly be used for the benefit of Eulemur mongoz (for example, but not exclusively: habit preservation or designation, reintroduction, habilitation, reducing poaching, human conflict mitigation, etc). For your understanding, ESA permit applications are evaluated under six criteria as laid out in 50 CFR 17.22(a)(2). Under these regulations information that supports these criteria have been met needs to be specific to the species that is being requested for export.

Regarding your question, if a loan document shows authorization of transfer of ownership or possession of the animals from those facilities to Duke Lemur Center then it would be adequate. Under 50 CFR 23.60 for a CITES permit I am required to make a finding of legal acquisition. This means I have to determine that an applicant is the lawful owner of any specimen they request for export [(50 CFR 23.34(b)(7)]. Unless there is documentation that shows ownership of these animals will be transferred to Duke Lemur Center prior to export, technically Philadelphia Zoo and Lemur Conservation Foundation are still the lawful owners of the animals located at their facilities, not Duke. I hope that helps to clarify.

Kind regards,

Amanda Lamberson
Biologist
U.S. Fish and Wildlife Service
Division of Management Authority
Branch of Permits, MS: IA
5275 Leesburg Pike
Falls Church, VA 22041

From: Amanda Mazza <amanda.mazza@duke.edu>

Sent: Wednesday, June 21, 2023 12:24 PM

To: Lamberson, Amanda M <amanda_lamberson@fws.gov>

Subject: RE: [EXTERNAL] RE: Incomplete Application - CITES/ESA CS0089413

Hi Amanda,

Thank you for the clarification. I'll get in touch with Tierpark for that information.

I have a few more updates to the questions you had asked:

- For lemur 1317, I noticed a microchip/transponder or tattoo number was not specified. **Transponder 00-07C8-9A63**
- Question 14. Please provide more detailed and specific information on how Tierpark Berlin supports AEECL and how such continued participation has likely reduced the threat of extinction specifically of the species *Eulemur mongoz* [50 CFR 17.22(a)(2)(iv)].
Since submitting this application Tierpark Berlin has stopped the cooperation with AEECL, because Tierpark were not longer convinced of the effectiveness of the conservation action. They are now supporting Impact Madagascar. This organization works at different sites in Madagascar, e.g. in Mariarano. This site is important for the conservation of the Coquerel's sifaka and the Mongoose lemur (see attached annual report).
- Answer Question 16. **Current inventory of Eulemur Mongoz at Tierpark Berlin is 2.2.**
- Answer Question 21. **Tierpark Berlin has the capacity to hold their current population as well as 2 more pair. This shipment will bring them to capacity.**

Sorry I didn't ask this last time. When you say "Please provide documents on transfer of ownership or transaction agreements with the Philadelphia Zoo and Lemur Conservation Foundation for lemurs 1317, 1271, and 1294." Do you mean the loan docs between the 2 institutions? At some point the Lemur Center will be taking in all these animals before we ship them to Germany. We will only have them for a short time before and we have not set a date yet for when they will all arrive. I can get the documents together now if that's needed. I just wanted to make sure I understood.

Thank you so much!!
Amanda Mazza
Registrar/Data Manager
Duke Lemur Center
3705 Erwin Road
Durham, NC 27705
919-401-7272
<http://lemur.duke.edu/>
Pronouns: she/her/hers

From: Lamberson, Amanda M <amanda_lamberson@fws.gov>
Sent: Tuesday, June 20, 2023 10:47 AM
To: Amanda Mazza <amanda.mazza@duke.edu>
Subject: Re: [EXTERNAL] RE: Incomplete Application - CITES/ESA CS0089413

Good morning Amanda,

Thank you for your reply and apologies for the lack of clarity in my question. The information for #13a is needed from Tierpark Berlin. For question 13c., at least some of the information will be needed from Tierpark Berlin (facility carrying capacity, disposition of progeny) but some information may or may not be a part of the documents for question 13b (avoidance of inbreeding, average kinship, difference in paternal/maternal blood relationships) as such proof of involvement in a breeding program like an SSP may include genetic analysis, etc. Let me know if you have further questions.

Kind regards,
Amanda Lamberson

From: Amanda Mazza <amanda.mazza@duke.edu>
Sent: Friday, June 16, 2023 1:37 PM
To: Lamberson, Amanda M <amanda_lamberson@fws.gov>
Subject: [EXTERNAL] RE: Incomplete Application - CITES/ESA CS0089413

This email has been received from outside of DOI - Use caution before clicking on links, opening attachments, or responding.

Hi Amanda,

Thank you so much for this update. I apologize for the incomplete information. This is my first time applying for a CITES permit on my own.

I've reached out to Lemur Conservation Foundation requesting an update on #1317's transponder number. I've also reached out to Tierpark Berlin for more information. When I receive this info, should I email it to you directly or upload it into the permit portal?

In regards to studbook #1271/1272, the correct SB number is 1272.

For question 13, I'm a little confused. Is this asking about the Duke Lemur Center or Tierpark Berlin? Or both?

Looking forward to working with you on this permit process! Thank you for all your help.

Take care,
Amanda Mazza
Registrar/Data Manager
Duke Lemur Center
3705 Erwin Road
Durham, NC 27705
919-401-7272
<http://lemur.duke.edu/>
Pronouns: she/her/hers

From: Lamberson, Amanda M <amanda_lamberson@fws.gov>
Sent: Thursday, June 15, 2023 3:34 PM
To: Amanda Mazza <amanda.mazza@duke.edu>
Subject: Incomplete Application - CITES/ESA CS0089413

Dear Amanda,

Thank you for your application for a U.S. CITES/ESA export permit. However, your application is incomplete. The following is the information that is still needed. Please note, question numbers I specify correspond to those as listed in the official Section E form and may not match those in the word document application form submitted. I have attached the official Section E form for your reference.

- Please provide documents on transfer of ownership or transaction agreements with the Philadelphia Zoo and Lemur Conservation Foundation for lemurs 1317, 1271, and 1294. Also, please verify studbook # 1271 is correct. The Species 360 report that appears to correspond with this animal lists studbook # 1272.

- For lemur 1317, I noticed a microchip/transponder or tattoo number was not specified. It is advisable for the animal to have some form of physical identification that can be used by the port inspectors unless there is a particular reason this cannot be done. Otherwise this may cause issues or delays during inspection.
- For question 13. a., please provide further description of how the lemurs will be propagated.
- Please provide documentation showing participation in an established breeding program (example: current breeding plan outlining your role in the program). A letter from breeding coordinator alone is not sufficient.
- Answer question 13.c. This may be information provided in the documentation of participation in an established breeding program.
- Question 14. Please provide more detailed and specific information on how Tierpark Berlin supports AEECL and how such continued participation has likely reduced the threat of extinction specifically of the species *Eulemur mongoz* [50 CFR 17.22(a)(2)(iv)].
- Answer Question 16. And 21.
- As *Eulemur mongoz* is a CITES Appendix I listed species, a CITES import permit is required before the corresponding CITES export permit may be issued. You will need provide a copy of the issued CITES import permit from Germany or evidence one will be issued by the German CITES Management Authority.

While the import permit is necessary for the export permit to be issued, I would advise you to prioritize the other information first. We will need all of the other information before we can submit this application to the Federal Register for 30 day public comment, as is required for all import/export applications for ESA listed species. The other exception is the physical identification. Unless lemur 1317 has a current microchip/transponder or if the decision is made to microchip the lemur, that number can be provided later. Please let me know if you have any questions or need clarification. Thank you.

In accordance with 50 CFR 13.11(e), if the requested information is not received by this office within 45 calendar days of the date of this email, your application will be abandoned and administratively closed. Once a file is closed, you will need to submit a new application, and all required fees, for the Service to consider your proposed activity.

Kind regards,

Amanda Lamberson
 Biologist
 U.S. Fish and Wildlife Service
 Division of Management Authority
 Branch of Permits, MS: IA
 5275 Leesburg Pike
 Falls Church, VA 22041

Update on Mongoose lemur population and habitat in Boeny Region

IMPACT Madagascar
June 2023

IMPACT Madagascar started to work on *Eulemur mongoz* (mongoose lemurs) back in 2014-2015. Our team focused on population surveys as part of the overall biodiversity & lemur survey in our target sites.

This target site is Ankirihitra forests that have been identified as an important ecosystem for dry deciduous habitat and gallery forests in the northern western of Madagascar.

The site harbors various species of fauna and flora, as well as various types of ecosystems spread within 6 forest fragments of 5,000 ha. There are at least 3 species of lemurs occurring on site, including the crowned sifaka (EN, IUCN Red list), the red fronted brown lemur (VU, IUCN Red list) and the mongoose lemur (CR, IUCN Red list).

Ankirihitra is also an important site for mongoose lemur, as it constitutes an extension of the distribution range of the species into the southern part and central highlands compared to its known distribution range.

Therefore, our team implemented a behavioral ecology study on mongoose lemurs in 2017 and 2018 in order to understand more of the needs of the species (The report is available in French). We also collected climatic data over seasons that could be interpreted with the reproductive stages of the species.

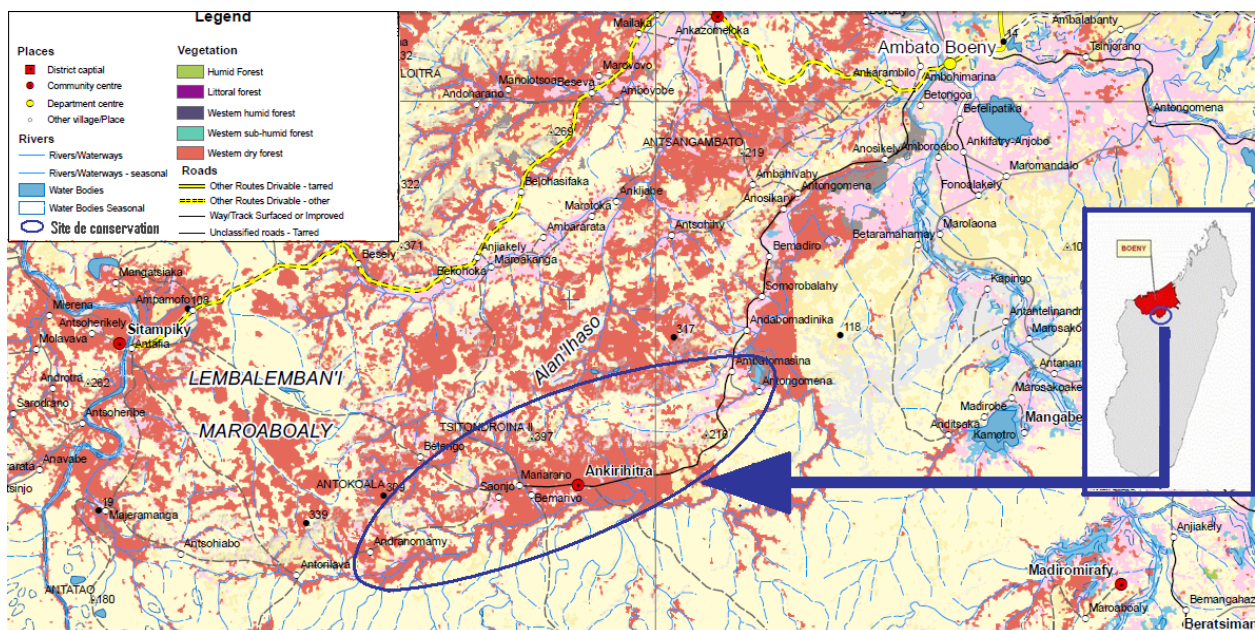


Figure 1: Ankirihitra site with an important dry forests habitat.

From 2021 -2022, IMPACT Madagascar launched a research project on Sifaka species (crowned and coquerel's sifaka) in the northwestern part of Madagascar, including Ankirihitra and Mariarano sites, where both sites harbour an important population of mongoose lemurs. Inventories and surveys are being conducted in both sites and inform recent important data on the sifaka species as well as the mongoose lemurs.

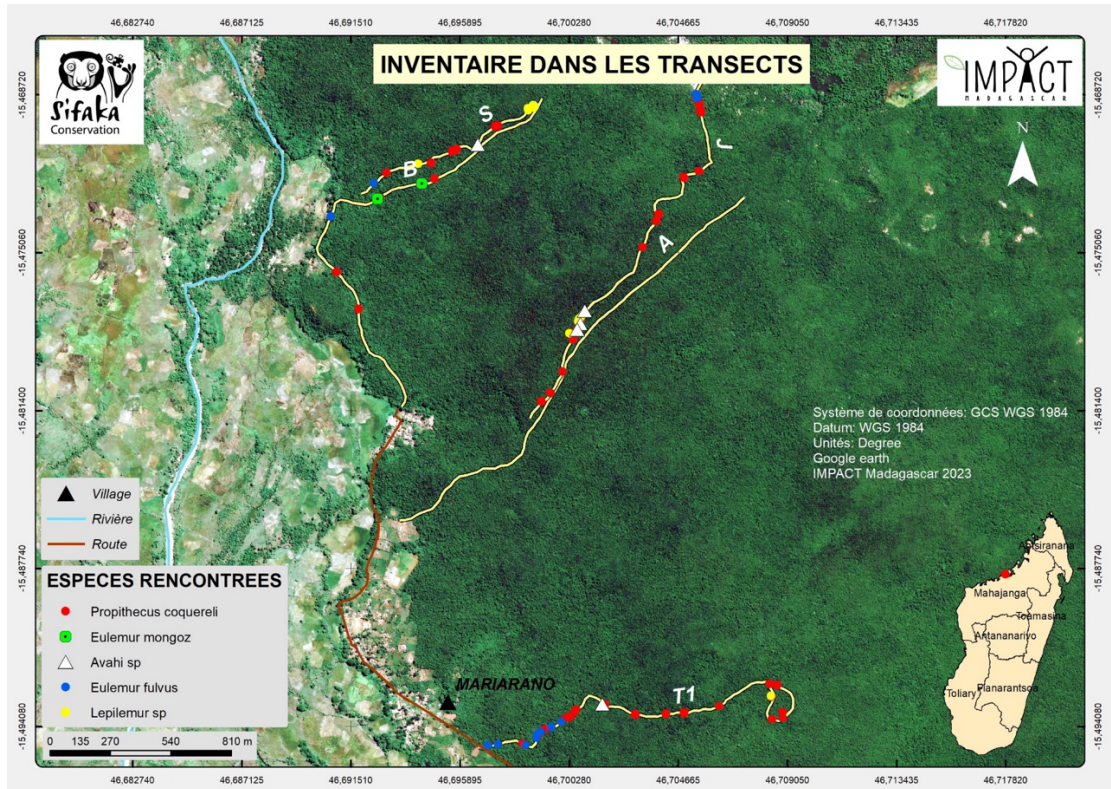


Figure 2: Mariarano forests with transect lines for lemur surveys (dedicated for coquerel's sifaka, but with observation of mongoose lemurs)

Summary of the results from previous surveys regarding mongoose lemur:

<i>Eulemur mongoz</i> , observed per site	Year 2016	Year 2018	Year 2022	Comments
---	-----------	-----------	-----------	----------

Ankirihitra	Density ranges between 4 to 40 ind/km ²		Density = 2 ind/km ² (data from 1 forest fragment only) 11 individuals observed outside of the transect lines	There is a significant decrease of the mongoose lemur population in the area.
Mariarano	No data	No data	2 individuals observed on the transect lines 04 individuals observed outside of the transect lines	The forest harbors a population of mongoose lemurs that requires more appropriate surveys to define the status of the mongoose lemur population

Threats inventory:

Type of threats on the habitat and mongoose lemur species	Level			Urgency of remediation actions
	Low	Medium	High	
Bushfire		+		
Invasive plant species	+			
Clearing for agriculture			+	Urgent
Illegal logging		+		
Lemur hunting			+	Very urgent
Divagation of human pets (such as dogs)		+		
Cattle grazing			+	Urgent



It is highly required to implement specific actions on the mongoose lemur species in Ankirihitra and Mariarano forests to raise the profile of the species in the area, but also to gather scientific data that would help in the conservation of the species in Madagascar and zoos.

Actions are:

- To gather more scientific data on the species that would help in protecting the species and its habitat in Madagascar and in Zoos:
 - o To conduct an intensive and comprehensive survey of the mongoose lemur population in order to determine the abundance and the distribution of the species in both forests and to understand the possible change of that abundance
 - o To continue collecting climatic data over seasons and reproductive stages of the species
- To raise awareness of the species and its importance in the forest to local communities : environmental education, series of campaign of the species

IMPACT Madagascar already provides activities that support the communities' incomes and access to food (such as improved agriculture, poultry farming and beekeeping), but these needs to be reinforced and implemented with conservation agreements with local communities.

Team: 3 biologist researchers, 6 local guides.

Expected results:

- We expect to have the data and information regarding the:
 - o Density and abundance of the species from Mariarano and Ankirihitra forests
 - o Maps of the distribution of the species
 - o Updates on the types of threats occurring in the habitat
 - o Quantity and distribution of the threats in the area
 - o Rainfall, temperature and humidity of the forest where the species occurs.
 - o Understanding and engagement of communities to contribute in the mongoose lemurs protection
 - o Series of campaign awareness to reduce/stop lemur hunting
 - o Improved access to protein/meat at local community level through improved livelihood projects

Amanda Lamberson

From: Amanda Mazza <amanda.mazza@duke.edu>
Sent: Monday, July 10, 2023 12:26 PM
To: Lamberson, Amanda M <amanda_lamberson@fws.gov>
Subject: RE: [EXTERNAL] RE: Incomplete Application - CITES/ESA CS0089413

Hi Amanda,

Attached is further documentation from Tierpark Berlin regarding IMPACT Madagascar and answers to question 13.

Tierpark is currently in the process of getting their import permit. I will submit that copy to you when I receive it.

Please let me know if you need anything else.

Thank you,
Amanda Mazza
Registrar/Data Manager
Duke Lemur Center
3705 Erwin Road
Durham, NC 27705
919-401-7272
<http://lemur.duke.edu/>
Pronouns: she/her/hers

From: Lamberson, Amanda M <amanda_lamberson@fws.gov>
Sent: Monday, July 3, 2023 3:36 PM
To: Amanda Mazza <amanda.mazza@duke.edu>
Subject: Re: [EXTERNAL] RE: Incomplete Application - CITES/ESA CS0089413

Hi Amanda,

Thank you for the additional documents. I've reviewed everything provided so far and this is the remaining information we still need.

1. A response to 13.a from Tierpark. This doesn't need be very detailed, we are mainly just needing to know how they intend to breed the lemurs (i.e. artificial insemination, breeding pairs, etc)
2. Documents/information for 13.b and 13.c (I understand you are waiting on some of that information). If you can provide a copy of the Yellow Species Survival Plan for *Eulemur mongoz* that would also provide useful information.
3. The supporting information on IMPACT Madagascar's work with *Eulemur mongoz*, is helpful but neither document provides any details on Tierpark's intended contribution to the program. Quoting from question 14, we are needing "documentation (e.g., signed memorandums of understanding) demonstrating your commitment to supporting the program and how the program contributes directly to the species identified in your application." Basically proof of how Tierpark is planning to support IMPACT Madagascar. If monetarily, they could provide estimated future contributions they are committed to making, as an example.
4. German CITES import permit (can be provided later on)

Thank you.

Kind regards,

Amanda Lamberson
Biologist
U.S. Fish and Wildlife Service
Division of Management Authority
Branch of Permits, MS: IA
5275 Leesburg Pike
Falls Church, VA 22041

From: Amanda Mazza <amanda.mazza@duke.edu>
Sent: Monday, July 3, 2023 12:24 PM
To: Lamberson, Amanda M <amanda_lamberson@fws.gov>
Subject: RE: [EXTERNAL] RE: Incomplete Application - CITES/ESA CS0089413

Hi Amanda,

I've attached the signed loan documents from the Philadelphia Zoo and Lemur Conservation Foundation. I hope this satisfies the transfer of ownership requirement.
Also is a letter from EAZA prosimian tag, but I'm still waiting for the letter from the EEP coordinator to further support question 13.

If there is anything else I need to provide please let me know.

Thank you so much!
Amanda Mazza
Registrar/Data Manager
Duke Lemur Center
3705 Erwin Road
Durham, NC 27705
919-401-7272
<http://lemur.duke.edu/>
Pronouns: she/her/hers

From: Lamberson, Amanda M <amanda_lamberson@fws.gov>
Sent: Monday, June 26, 2023 1:31 PM
To: Amanda Mazza <amanda.mazza@duke.edu>
Subject: Re: [EXTERNAL] RE: Incomplete Application - CITES/ESA CS0089413

Good afternoon Amanda,

Yes, that should suffice.

Kind regards,

Amanda Lamberson

From: Amanda Mazza <amanda.mazza@duke.edu>
Sent: Monday, June 26, 2023 1:18 PM
To: Lamberson, Amanda M <amanda_lamberson@fws.gov>
Subject: RE: [EXTERNAL] RE: Incomplete Application - CITES/ESA CS0089413

Hi Amanda,

Sorry for this extra email.

As for the lemurs that are still housed at Philly and LCF, they will be donated to the DLC prior to this shipment. Would a letter from both institutions stating that they will be donating these animals to us suffice? I can also draw up our donation documents for them to sign as well.

Thank you,
Amanda Mazza
Registrar/Data Manager
Duke Lemur Center
3705 Erwin Road
Durham, NC 27705
919-401-7272
<http://lemur.duke.edu/>
Pronouns: she/her/hers

From: Lamberson, Amanda M <amanda_lamberson@fws.gov>
Sent: Wednesday, June 21, 2023 3:33 PM
To: Amanda Mazza <amanda.mazza@duke.edu>
Subject: Re: [EXTERNAL] RE: Incomplete Application - CITES/ESA CS0089413

Good afternoon Amanda,

Thank you for the additional information.

The IMPACT report is useful supporting documentation, however it is broad and I am still needing a more specific statement on how Tierpark Berlin's support of this organization has or will likely reduced the threat of extinction to Eulemur mongoz. This should include how much they are contributing, for how long, and ways in which those funds may directly or indirectly be used for the benefit of Eulemur mongoz (for example, but not exclusively: habit preservation or designation, reintroduction, habilitation, reducing poaching, human conflict mitigation, etc). For your understanding, ESA permit applications are evaluated under six criteria as laid out in 50 CFR 17.22(a)(2). Under these regulations information that supports these criteria have been met needs to be specific to the species that is being requested for export.

Regarding your question, if a loan document shows authorization of transfer of ownership or possession of the animals from those facilities to Duke Lemur Center then it would be adequate. Under 50 CFR 23.60 for a CITES permit I am required to make a finding of legal acquisition. This means I have to determine that an applicant is the lawful owner of any specimen they request for export [(50 CFR 23.34(b)(7)]. Unless there is documentation that shows ownership of these animals will be transferred to Duke Lemur Center prior to export, technically Philadelphia Zoo and Lemur Conservation Foundation are still the lawful owners of the animals located at their facilities, not Duke. I hope that helps to clarify.

Kind regards,

Amanda Lamberson
Biologist
U.S. Fish and Wildlife Service
Division of Management Authority
Branch of Permits, MS: IA
5275 Leesburg Pike



LEMUR
CONSERVATION
FOUNDATION

P.O. Box 249
Myakka City, FL 34251
941 322-8494
www.lemurreserve.org

June 28, 2023

To Whom It May Concern:

The Lemur Conservation Foundation (LCF) confirms that *Eulemur mongoz*, "Javier" (LCF Accession #100123, AZA studbook #1294), and *Eulemur mongoz*, "Zoe" (LCF Accessions #100162, AZA studbook #1317) are being donated to the Duke Lemur Center (DLC). This will eventually lead to DLC sending these individuals to Tierpark Berlin once permits allow.

Sincerely,

Meredith Hinton

Curator

Lemur Conservation Foundation

O: (941) 322-8494

F: (941) 322-9264

mhinton@lemurreserve.org

www.lemurreserve.org



Animal Transaction Confirmation

This form will serve as a confirmation of the following animal transaction(s) from/to the Lemur Conservation Foundation's Myakka City Lemur Reserve. It is not an invoice but must be signed and returned prior to shipment of animals.

☐ sale ☒ donation ☐ loan

Date: June 28, 2023

To: Duke Lemur Center
3705 Erwin Road
Durham, NC 27705
919-401-7240

From: Lemur Conservation Foundation
42500 73rd Ave E.
Myakka City, FL 34251
941-322-8494

Species/ID #: *1.1 Eulemur mongoz* (Mongoose lemur) "Javier" 100123 MYAKKACLR; AZA SB #1294
"Zoe" 100162 MYAKKACLR; AZA SB #1317

The receiving party agrees that this transfer and any subsequent transfer of the animal(s) will be accomplished in accordance with the following conditions:

- Adherence to the AZA Code of Professional Ethics and institutional guidelines for the disposition of animals received.
- Specimen(s) will not be sold, traded, loaned or donated to, or used in an inhumane research program; will not be sold, traded, loaned or donated to any individual or organization which may use the specimen(s) in an animal auction attended by the general public or disposed of by the undersigned in any such auction; will not be sold, traded, loaned or donated to any organization or individual for the purpose of sport/trophy/or any form of hunting; will not be sold, traded or otherwise transferred to any organization of individual known to abuse, neglect, or otherwise mistreat animals.
- Specimen(s) will be housed, fed, and maintained in a manner which will ensure its health and well-being.
- All paperwork and permits related to this transaction must be received by the LCF prior to shipment. The offer for transactions involving endangered or threatened species is contingent upon receipt of appropriate permits.
- This transaction can be terminated by either party by written notice prior to shipment.
- All expenses associated with transportation to the receiving institution will be the responsibility of the receiving institution.

Lemur Conservation Foundation

Receiving Institution

Accepted by

Meredith Hinton

Print Name

Curator

Title

6/28/2023

Date

Consignee

Kristin Clark

Print Name

Assistant Curator

Title

6/30/23

Date

Please sign one copy and return to:

Meredith Hinton
Lemur Conservation Foundation
PO Box 249
Myakka City, FL 34251


PHILADELPHIA ZOO
TRANSACTION CONFIRMATION FORM

PZ USDA # 23-C-0004
PZ AZA # 5463200

USDA # 55-C-0110
AZA # 81002607

d

TO: Duke Lemur Center
3705 Erwin Road
Durham, NC 27705-5000

DATE: 28 June 2023

**THIS IS NOT AN INVOICE, MUST BE SIGNED &
RETURNED PRIOR TO SHIPMENT**

PHONE: (919) 401-7272

ATTN: Amanda Mazza, Registrar/Data Manager (amanda.mazza@duke.edu)

From the Philadelphia Zoological Garden:

Quantity	Species/ISIS #	Value Each	Value Total
0.1	Mongoose lemur (<i>Eulemur mongoz</i>) PZ #105141 -- "Natasha" -- Regional studbook #1272	N/A	Donation

*** Signature SSP Breeding Recommendation ***

TOTAL CASH	\$0.00
TOTAL OPEN EXCHANGE	\$0.00

To the Philadelphia Zoological Garden:

-- none --

Cash or credit due Philadelphia Zoo	\$0.00
Cash or credit due Duke Lemur Center	\$0.00

Shipping arrangements will be made by the Philadelphia Zoo, with costs paid by Duke Lemur Center.

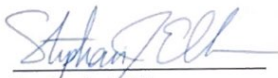
Crate(s) will be provided by the Philadelphia Zoo. Unless other arrangements have been made, crate(s) must be returned (prepaid via common carrier) within 30 days of transfer.

Remarks: The Philadelphia Zoo acknowledges and agrees with the planned export of "Natasha" to Germany shortly (or immediately) after her transfer to DLC. Pre-shipment veterinary requirements should be forwarded to Dr. Donna Ialeggio. Please include Michael Stern and Katelyn Wolfrom in any communications regarding the physical transfer. Husbandry records are shared in ZIMS; medical records will be fully shared in the near future. The ADTF will be available in ZIMS as a husbandry note.

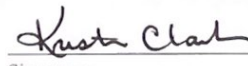
I hereby affirm that I have read, understand, and agree to abide by all conditions enumerated on both sides of this transaction form. I also declare this transaction has been approved through my institution's acquisition/disposition process and sign this form as a duly authorized representative. Once this form has been signed by both parties, it is considered final; any changes to the terms or conditions must be agreed upon by both parties, in writing, prior to the transfer of the animal(s).

I have reviewed & agree to all conditions on the reverse of this document: _____ (please initial)

Accepted by:


Stephanie J. Eller
Philadelphia Zoo

28-Jun-23
Date


Signature

6 / 30 / 23
Date

Kristin Clark, Assistant Curator
Printed name, Title
Duke Lemur Center

Please sign and return by e-mail -- dukelemur@philazoo.org

Alternatively, hard copies may be mailed to:
Stephanie Eller, Registrar, Philadelphia Zoo,
3400 W. Girard Ave., Philadelphia, PA 19104-1196

To whom it may concern

29 June 2023

Subject: Transfer of Mongoose lemurs (*Eulemur mongoz*) from SSP to EEP

Mongoose lemurs (*Eulemur mongoz*) are defined as a priority species for conservation breeding within the framework of an *ex situ* Programme (EEP) in the European Association for Zoos and Aquaria (EAZA). This is because of the status of being critically endangered according to the IUCN Red List.

The EEP population of the Mongoose lemur is dramatically aging and the perspective of establishing a sustainable population with an insurance role is bleak. This is why the EAZA Prosimian TAG reached out to their AZA counterpart to propose an interregional cooperation for the benefit of the EEP as well as the SSP for Mongoose lemurs with the ultimate goal to work towards an informal global programme.

The overall *ex situ* population of Mongoose lemurs will benefit from a transfer of animals from the SSP to the EEP in the way that the SSP can breed additional animals beyond the carrying capacity in AZA and the EEP will save and hopefully expand its population of this species. In this way the global *ex situ* population will be regarded as sustainable.

It is worth mentioning that there are links of the EEP / Prosimian TAG to Madagascar to safeguard Mongoose lemurs *in situ*. Also, there has been a transfer of a male individual from the EEP to an *ex situ* facility in Madagascar to be combined with a single female there with the intention to breed.

It is obvious and strengthened that there is a greater and more complex conservation effort given for which the *ex situ* activities are essential and even crucial.

The EAZA Prosimian TAG is supporting and guiding the transfer of Mongoose lemurs from the AZA SSP to the EAZA EEP and is actively facilitating the process.

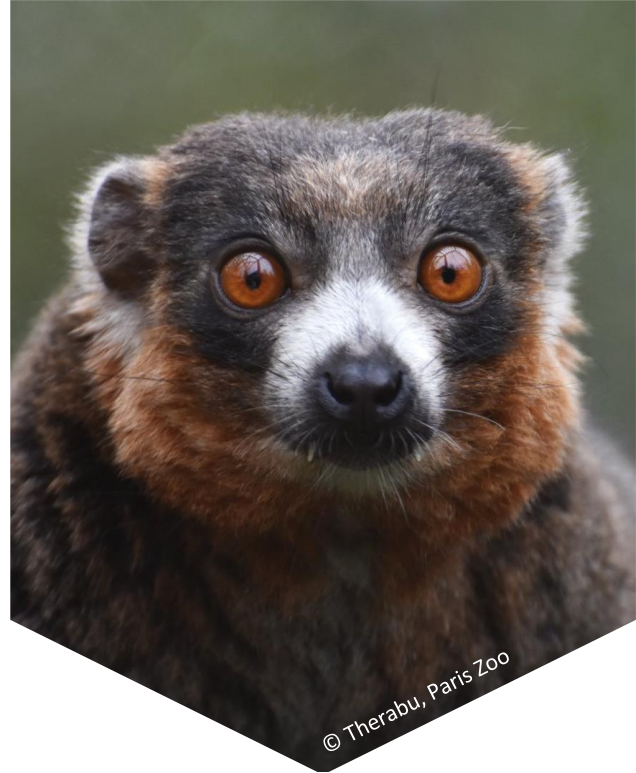


Achim Johann
Chair of the EAZA Prosimian TAG

Long-term Management Plan for the Mongoose lemur *Eulemur mongoz* EAZA Ex situ Programme (EEP)



11 February 2022



EEP coordinator
Kim Simmons
Linton Zoological Gardens

Population biologists
Charlotte Desbois, EEO and Mulhouse ZOO
Marie Corlay, EAZA Executive Office (EEO)

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Calls for Action

- EEP participants are asked to maximise breeding by following the guidance developed in the plan, and that will later be shared in the Best Practice Guidelines. The breeding success in the coming years will be crucial for the population's survival.
- EEP participants are asked to follow any transfer recommendations that will be issued separately from this document.
- Please follow and contribute to research according to the EEP research plan that will be developed later on this year.
- Institutions are encouraged to support the activities of the Sifaka Conservation Project.

Roles

The Mongoose lemur is listed as Critically Endangered on the IUCN Red List (2018). The EEP population consist of 37 (23.14.0) individuals held by 14 institutions.

One important role of the population, as defined during the Prosimian TAG Regional Collection Plan (2018) is to become an **insurance** population. No reintroductions or supplementations are currently planned, but in the long-term, the EEP population is a potential future source to build up populations for reintroduction in Madagascar, together with the AZA population.

The EEP also has a **fundraising** role, and holders are encouraged to support the work of the Sifaka Conservation Project for their study on mongoose lemurs. This association also provides **conservation education** in range and aims to research, protect and restore the vital ecosystems of different lemur

species, by collaborating with local communities and authorities to establish a sustainable and biodiverse habitat for the future. A monitoring program is also in place in order to have better estimates on the lemur density, and especially the mongoose lemurs.

Ex situ training outside range, is an important role of the population. However, it is challenging as communication with Malagasy institutions can sometimes be difficult. Research on the species' husbandry is needed and would be beneficial for all holders, in EAZA, AZA and Malagasy institutions.

Goals

To be able to reach the above roles:

- Births are rare and the population is therefore ageing rapidly. In order to avoid the loss of the population, the breeding rate must be improved significantly. The causes for this are not entirely clear and need to be further investigated and addressed.
- Genetic diversity is quite low and the individuals are already highly related. Because the population is very small with only a few individuals reproducing, this will further decrease in the coming years. In order to build up an insurance population, this situation needs to be radically improved in the coming decade. This will require close cooperation with AZA and Madagascar as discussed below.

The plan

Currently, the European population is not yet fulfilling its insurance role because of the very small number of individuals in the programme and its bad genetic status. Nevertheless, the EEP will continuously look for opportunities to improve the long-term prospect for the species.

For this, close collaboration of all participants is crucial and the EEP will aim for the following objectives:

Reproductive planning and management strategy

The EEP's priority in the coming years is to avoid that the population is lost. Space is not an issue for the population as there is available space for up to 60 individuals in EAZA institutions with current and interested holders. However, the birth rate is far too low and the population is aging. The annual birth rate in the EEP will need to increase from one to at least five births per year. As mentioned, the reasons for the low breeding rate are not entirely clear and more research is needed, this will be led by the EEP coordinator together with the TAG. Several new pairs have been created recently and the results of these exchanges will hopefully be seen soon. Nevertheless, all institutions are asked to focus on maximising breeding as this seems crucial to save the population. Meanwhile, the following is recommended:

- EEP participants are asked to closely monitor each females' cycle (changes in vulva's morphology and marking behaviour) and each males' cycle (testicular swelling and marking behaviour) and to work with their vet or a specialist to take samples from males to evaluate testosterone levels. Advice and guidance on the best way to do this (invasive or non-invasive method) according to the specificity of the animals can be given by the species vet advisor if needed.
- Obesity has been a recurrent problem in the EEP population, and it is crucial to be very careful about each individual's weight in order to increase breeding success:
 - Holders are therefore asked to strictly monitor and try their best to reduce the weight of overweight individuals. Particular attention must be given to the food they are being offered and to all sources of natural food (e.g. grass, plants, substrate) they can find in their enclosures.

- It will also be considered to slightly reduce the housing's temperature at night (to 15-17°C) to increase the lemurs activity such as habitat exploration, as they would do in the wild.
- When kept in mixed-species enclosures, mongoose lemurs tend to dominate the food source. If feeding them separately is not feasible, it will be considered to remove them from the mixed exhibit to ensure that they do not eat more than necessary.

Breeding and transfer recommendations of the EEP will also have the main aim to maximise reproduction. Since 2011, only four pairs have bred and only two have reared young successfully. Therefore, pairs that breed successfully should be kept together, even if they are not the best genetic matches. Furthermore, females seem to have more trouble to breed if their first breeding opportunity occurs after their fourth year. In consequence, and in order to create a strong bond between male and female, pairs will be created with young females aged between two and four years old that are ready to leave their family group. Finally, the EEP is working on imports of two pairs from the AZA SSP in 2022 or 2023. One pair will be sent to Tierpark Berlin and the other one to NaturZoo Rheine. These two pairs are formed with young individuals and will hopefully help to boost demography in the European population.

Please consider holding a bachelor group. The sex-ratio in the population is skewed toward males (62%). As Mongoose lemurs tend to reproduce less when kept in groups rather than in pairs, it is necessary that some holders keep bachelor groups. Successful examples of bachelor groups already exist in the population, and advice on this topic can be asked from the EEP coordinator.

Please note that Mongoose lemur Best Practice Guidelines are currently being written by the EEP coordinator and will be soon available for all holders. Meanwhile, don't hesitate to contact the EEP coordinator for any advice.

Genetic management strategy

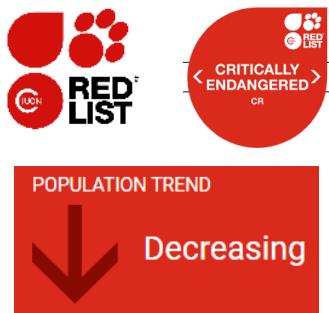
Once the population will start to grow, there will be a high need to increase genetic diversity.

- Imports from AZA already happened (9 (4.5) between 1989 and 2002) and will continue in the coming years with the import of 2 pairs from the AZA SSP as explained earlier in the document. Even if some animals might already be related to the EEP individuals at some degree, this will help improving the genetic status of the population.
- The EEP, with the EAZA Prosimian TAG approval and assistance, will consider exchanging individuals with Madagascar, as it has been done in 2017 with the export of a European male to Lemur's Park, when this could help building up a global *ex situ* population. However, importing or exporting individuals from or to Madagascar does not seem realistic as there is currently no mandate from the Malagasy government to move individuals in or out of the country. Whether this changes in the future depends on the development of the country's political situation.
- If improving genetic diversity cannot be done through the exchange of individuals with institutions in other regions, imports of cryopreserved semen and subsequent artificial insemination might be an option. This will be investigated at TAG level once it becomes relevant.

Fundraising

The EEP supports the *in situ* conservation of the species via the research programmes on Mongoose lemurs led by the Sifaka Conservation Program. This organisation works in Ankirihitra forest, located in the northwest of Madagascar in the Boeny region. The Ankirihitra forest is home to a population of Mongoose lemurs that has been the subject of eco-ethological monitoring for several years. The results, which are used for the conservation strategy of the species in Ankirihitra, could also provide valuable information to improve the management of the species in captivity (activity rhythm, diet, temperatures, etc.). If you have any question regarding this program or want to support it, please contact the EEP coordinator.

Appendix A - *In situ* and *Ex Situ* Status



Main threats:

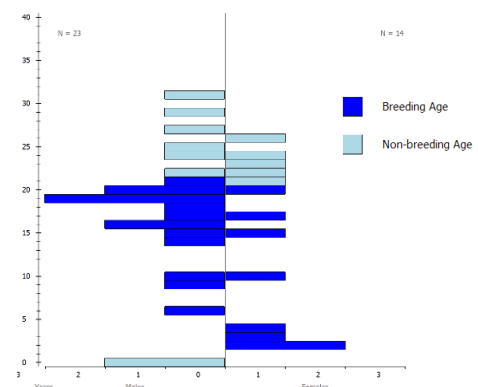
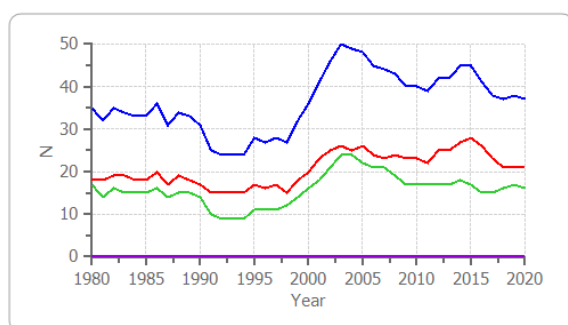
- Agriculture and aquaculture: annual and perennial non-timber crops, livestock farming and ranching
- Biological resource use: hunting and trapping terrestrial animals, logging and wood harvesting
- Natural system modifications: fire and fire suppression

EEP Population size: 37 (23.14.0)

Institutions: 13 EAZA + Lemurs park

Other regions: North America - 60 (35.25.0) in 18 institutions, Africa - 1 (0.1.0) in Johannesburg Zoological Gardens and Madagascar – 8 (3.5.0) in 2 institutions.

Demographic status



Genetic status

	Current	Potential
% known pedigree	90.3%	-
Number of founders	12	0
Current gene diversity (% GD)	81.1%	90.3%
Founder genome equivalents (FGE)	2.64	5.14
Average population mean kinship (mk)	0.19	
Average inbreeding coefficient (F)	0.05	

Appendix B - Acknowledgements

Contact details EEP coordinator: Kim Simmons, mongooselemureep@hotmail.com

Species Committee, advisors, etc.

Role	Name	Institution
EEP coordinator	Kim Simmons	Linton Zoological Gardens
Studbook keeper	Dawny Greenwood	
TAG chair	Achim Johann	NaturZoo Rheine
TAG vice-chair	Delphine Rouillet	Cotswold Wildlife Park
Species Committee	Ezgi Vatansever Çelik	Faruk Yalcin Zoo
	Ross Snipp	Flamingo Land
	Sébastien Verdin	Le Parc des Félines
	Jana Pluhackova	Ostrava Zoo
	Luca Morino	Parc Zoologique de Paris
	Will Walker	Wild Place Project
	Haylee Parker	Zoological Society of East Anglia
Vet advisor	Andreas Pauly	Tierpark Berlin
Advisor	Gary Batters	-
TAG Liaison	Kelly van Leeuwen	EAZA Executive Office
Population Biology	Charlotte Desbois	
Advisors	Marie Corlay	

The development of this document was supported by Mulhouse Zoo.



Appendix C - Actions for EEP coordinator

The following additional objectives have been set for the EEP, which do not need any action from the EEP participants yet. These will be driven by the EEP coordinator and the Species Committee, who will determine new actions each year. Note that the following actions are not necessarily in the right order of priority.

- Setting and communicating of annual breeding and transfer recommendations (that will be shared separately from this document).
- Maintain close collaboration with AZA and keep on working towards the importation of the two new breeding pairs to the EEP population.
- Together with the TAG, set up an online conference on husbandry of Mongoose lemurs with the AZA SSP coordinator and selected invitees.
- Finetune the mongoose lemur Best Practice Guidelines according to the review of the Species Committee and the conference with AZA colleagues.
- Making the research and results of the Sifaka Conservation Program on Mongoose lemurs more accessible and visible to supporting institutions and Mongoose lemur holders in general. Delphine Rouillet will work together with Josia Razafindramanana and Florence Perroux on this topic.
- Develop a research plan and implement the different research topics:
 - Nutrition and diet
 - Reproduction and cycles (female's cycles – develop a 'vulvoscope' with interested holders, testosterone levels on males, extreme seasonality of the reproduction, potential stimulation of the reproduction through socialisation, best age of pairing...)
 - Activity rhythm
 - Any other research topic that might come up during the discussion with AZA colleagues

Appendix D - Resources

Johann, A., Rouillet, D., Herrmann, K. Fienieg, E. (eds.) 2018. Regional Collection Plan for the EAZA Prosimian Taxon Advisory Group – Edition One. EAZA Executive Office: Amsterdam.

Razafindramanana, J., Eppley, T.M., Rakotondrabe, R., Rouillet, D., Irwin, M. & King, T. 2020. *Eulemur mongoz*. The IUCN Red List of Threatened Species 2020: e.T8202A115561431.

<https://dx.doi.org/10.2305/IUCN.UK.2020-2.RLTS.T8202A115561431.en>. Accessed on 13 December 2021.

6th July 2023

Dear U.S. Fish and Wildlife Services and all concerned Parties

The animals to be imported are to be part of the European Association of Zoos and Aquaria (EAZA) www.eaza.net Mongoose lemur EAZA Ex Situ Programme. EAZA has a membership of over 300 of the best zoos in Europe and the Middle East with another 40 in the process of joining. It is broadly equivalent to the American Zoo Association and runs over 400 captive managed programmes and is totally integrated with international conservation efforts and policies, working closely with the International Union for the Conservation of Species and the World Association of Zoos and Aquariums. There are currently sixteen zoos participating in the Mongoose lemur EEP.

The EEP coordinator is supported by a species committee whose members come from the following respected zoos, Tierpark Berlin, Paris Zoo, Ostrava Zoo, Czech Republic, Faruk Yakin zoo, Turkey, Le Parc des Felins, France and Linton Zoo, Cotswolds Wildlife Park, Wildplace/Bristol zoo, Africa Alive, all in the UK. The propagation of the species will be through proactive pairings of animals and genetic management of the species. The studbook programme of the Species 360 Zoo Inventory Management System animal records system. This system is used by most major zoos across the globe and certainly the majority in Europe and the US.

This programme runs reports on all the areas that you have mentioned including in breeding coefficients and mean kinship/relatedness. Progeny are distributed in accordance with the coordinators recommendations and Species committee agreement to ensure the best genetic matches and individual compatibility. The addition of the animals from the USA is essential to maintain the genetic material currently held in Europe of a species under severe threat in the wild.

Yours Sincerely



Kim Simmons

European Ex Situ Coordinator for Mongoose Lemur



Zoologischer Garten Berlin | Hardenbergplatz 8 | 10787 Berlin

Zoologischer Garten Berlin AG
Hardenbergplatz 8
10787 Berlin
info@zoo-berlin.de
www.zoo-berlin.de
www.aquarium-berlin.de
www.tierpark-berlin.de

Unser Zeichen
kh

Telefonnummer
+49 30 51531 147

E-Mail
artenschutz@zoo-berlin.de

Datum
10.07.2023

Supporting information on IMPACT Madagascar

To whom it may concern,

Tierpark Berlin is not only a well-known institution for leisure activities, but is also important places for environmental education, species conservation and research. As non-profit institutions, the Zoological Gardens of Berlin raise awareness of environmental protection and species and habitat conservation in a targeted way and make a sustainable contribution to global species and habitat protection. The conservation program of Zoo and Tierpark Berlin "Berlin World Wild" collaborates with conservation partners all around the world in several countries including Madagascar.

According to the IUCN, 95 percent of all Madagascar's lemurs are under threat of extinction and conservation actions are needed. Tierpark Berlin actively contributes to lemur conservation by supporting conservation activities with a strong focus on *Eulemur mongoz* and *sifakas sp.*. The work of IMPACT Madagascar/Sifaka Conservation in areas with populations of *Eulemur mongoz* is vitally important for the conservation of the species long-term. Field surveys informing on population developments and regular patrolling of the habitat have been proven to be effective for the long-term protection but only when being carried out regularly.

On recommendation of the EAZA Prosimian TAG, Tierpark Berlin supports the work of IMPACT Madagascar/Sifaka financially. A total of 11.500,00 € has been donated so far. Tierpark Berlin is furthermore raising awareness by distributing information via its social media channel. The partnership is officially confirmed by a duly signed agreement between both parties (Appendix 1).

The updated agreement is currently in development and will be ready for signing later this year. Tierpark Berlin will continue the financial support to IMPACT Madagascar/Sifaka

Vorsitzender des Aufsichtsrates
Frank Bruckmann
Vorstand
Dr. Andreas Knieriem

HR AG Charlottenburg HRB 4306 B
Steuernummer: 27/612/00636
VAT ID: DE 136782336

Commerzbank AG
IBAN: DE57100400000661234501
BIC: COBADE33XXX

Berliner Volksbank eG
IBAN: DE28100900008848114007
BIC: BEVODE33XXX



conservation in 2024 and onwards as part of the commitment to contribute to species conservation in Madagascar.

Best wishes,



TIERPARK
Berlin - Friedrichsfelde GmbH
Am Tierpark 125, D-10319 Berlin

Katharina Herrmann

Wildlife Conservation Coordinator
Zoologische Gärten Berlin



Ein Tochterunternehmen der
Zoologischer Garten Berlin AG

Tierpark Berlin-Friedrichsfelde | Am Tierpark 125 | 10319 Berlin

Tierpark Berlin-Friedrichsfelde GmbH
Am Tierpark 125
10319 Berlin
Tel: +49 (0)30 51 53 1-0
Fax: +49 (0)30 51 24 0-61
info@tierpark-berlin.de
www.tierpark-berlin.de

Agreement on Sifaka Conservation January 2023 – December 2023

Sifaka Conservation
Lot II A 103 Nanisana
Antananarivo 101
Madagascar

- hereinafter referred to as "**SC**" -

and

Tierpark Berlin-Friedrichsfelde GmbH
Am Tierpark 125
10319 Berlin
Germany

- hereinafter referred to as "**Tierpark Berlin**" -

- SC and Tierpark Berlin hereinafter referred to as "**parties**" -

The diversity of the earth and the future of countless animal and plant species are threatened. The parties are jointly committed to the global protection of wildlife and cooperate for the protection of sifakas in Madagascar (hereinafter referred to as "**project**"). The parties agree as follows:

1. Tierpark Berlin donates the total amount of EUR 5,000 to SC in the first quarter of 2023.
The bank details are as follows:

Account:	Sifaka Conservation Burford
Bank Name:	Nat West Bank, 21-23 High Street, Witney, Oxfordshire, OX28 6HW
IBAN:	GB56NWBK60246015687147
BIC:	NWBKGB2LXXX

Vorsitzender des Aufsichtsrates
Frank Bruckmann
Geschäftsführung
Dr. Andreas Knieriem

HR AG Charlottenburg HRB 37768
Steuernummer: 27/612/00903
VAT ID: DE 137229687

Berliner Volksbank e. G.
IBAN: DE05100900008848115003
BIC: BEVODE33XXX

Commerzbank AG
IBAN: DE84120400000911144400
BIC: COBADE33XXX




Handwritten signature



Ein Tochterunternehmen der
Zoologischer Garten Berlin AG

2. Tierpark Berlin advertises the work of the project on its website and social media channels (e.g. Facebook, Instagram, and Twitter) as well as those of Zoo Berlin and "Berlin World Wild". SC social media accounts will be mentioned in the related posts. Tierpark Berlin provides logos for display in the project.
3. SC uses the donated amount to cover the expenses listed in the budget breakdown (Annex 1). Any relevant milestones are also relevant for communication will be communicated to Tierpark Berlin in advance. A written update on the progress is provided biannually. Upon closure of the project, SC provides a final report.
4. SC provides Tierpark Berlin with pictures and video material of the project for use on its website, social media channels as well as those of Zoologischer Garten Berlin AG, and the animal enclosures at Tierpark Berlin upon request. SC will visibly display the logos from Tierpark Berlin and Berlin World Wild in the project.
5. SC acknowledges Tierpark Berlin's financial support, especially when sharing information with the International Union for Conservation of Nature (IUCN) and other conservation organisations.

Berlin,

18. Apr. 2023


Dr. Andreas Knieriem

Director General | CEO
Tierpark Berlin-Friedrichsfelde GmbH

Antananarivo, 09 January 2023



Josia Razafindramanana

Project Manager
Sifaka Conservation

From: [Amanda Mazza](#)
To: [Lamberson, Amanda M](#)
Subject: RE: [EXTERNAL] RE: Incomplete Application - CITES/ESA CS0089413
Date: Wednesday, November 1, 2023 8:41:27 AM
Attachments: [statement keeping mongoose lemurs at Tierpark Berlin page 2.pdf](#)
[statement keeping mongoose lemurs at Tierpark Berlin page1.pdf](#)

Hi Amanda,

Attached is a letter from Tierpark Berlin on how they will manage their capacity.
Please let me know if you need any further information.

Amanda Mazza
Registrar/Data Manager
Duke Lemur Center
3705 Erwin Road
Durham, NC 27705
919-401-7272
<http://lemur.duke.edu/>
Pronouns: she/her/hers

From: Lamberson, Amanda M <amanda_lamberson@fws.gov>
Sent: Friday, October 27, 2023 1:17 PM
To: Amanda Mazza <amanda.mazza@duke.edu>
Subject: Re: [EXTERNAL] RE: Incomplete Application - CITES/ESA CS0089413

Hi Amanda,

Thank you for the transfer records.

Regarding the statement from Tierpark Berlin, this information is contradictory to the information provided in the application and the purpose of the export of the four mongoose lemurs. The information provided in response to Question 21 specified they have the capacity to care for a total of 8 mongoose lemurs, with this import of the four lemurs putting them at that capacity. Under the ESA, the Service will consider the export of Endangered listed wildlife for scientific purposes, for enhancing the propagation or survival, or for the incidental taking of endangered wildlife. If Tierpark Berlin intends to make a sincere effort to breed these animals for the purposes of propagating the species then this should result in their facility exceeding capacity at some point. If they have no intention to breed the lemurs then this will likely result in our office being unable find that this export meets enhancement requirements and will likely result in a denial of the application. Either Tierpark Berlin needs to present an acceptable plan on how they will breed the lemurs while maintaining the species such as to not exceed capacity (such as moving some lemurs to another facility) or explain how they are equipped to accommodate additional lemurs when they stated their capacity was 8. Or the

number of lemurs to be exported needs to be reduced.

Kind regards,

Amanda Lamberson
Biologist
U.S. Fish and Wildlife Service
Division of Management Authority
Branch of Permits, MS: IA
5275 Leesburg Pike
Falls Church, VA 22041

From: Amanda Mazza <amanda.mazza@duke.edu>
Sent: Friday, October 27, 2023 12:38 PM
To: Lamberson, Amanda M <amanda_lamberson@fws.gov>
Subject: RE: [EXTERNAL] RE: Incomplete Application - CITES/ESA CS0089413

Hi Amanda,

Attached are the transfer docs for Zoe from Philly to LCF.

For the question about Tierpark's capacity: In order to prevent their capacity from exceeding its limit, Tierpark would not have originally agreed to accept these animals. When agreeing to this transaction it is understood they must also have room for any offspring, again, if they thought this would cause them to exceed their capacity they would not have agreed to participate. Like many zoos, it is their policy to not accept any animals if it would cause them to exceed capacity.

Please let me know if you need anything further information or documentation.

Thank you,
Amanda Mazza
Registrar/Data Manager
Duke Lemur Center
3705 Erwin Road
Durham, NC 27705
919-401-7272
<http://lemur.duke.edu/>
Pronouns: she/her/hers

From: Lamberson, Amanda M <amanda_lamberson@fws.gov>
Sent: Friday, October 27, 2023 11:07 AM
To: Amanda Mazza <amanda.mazza@duke.edu>
Subject: Re: [EXTERNAL] RE: Incomplete Application - CITES/ESA CS0089413

Hi Amanda,

Yes, I need transaction between Philly and LCF. That transaction should have been recorded in Species360 but it seemingly was not, and I missed that initially. However the full chain of custody has to demonstrated per CITES regulations so we do need either some other documentation or a letter from the Philadelphia Zoo explaining the transaction. Thank you.

Kind regards,

Amanda Lamberson
Biologist
U.S. Fish and Wildlife Service
Division of Management Authority
Branch of Permits, MS: IA
5275 Leesburg Pike
Falls Church, VA 22041

From: Amanda Mazza <amanda.mazza@duke.edu>
Sent: Friday, October 27, 2023 10:47 AM
To: Lamberson, Amanda M <amanda_lamberson@fws.gov>
Subject: RE: [EXTERNAL] RE: Incomplete Application - CITES/ESA CS0089413

I attached the APHIS and the Transaction agreement between the DLC and LCF.
Do you also want the transaction between Philly and LCF?

Amanda Mazza
Registrar/Data Manager
Duke Lemur Center
3705 Erwin Road
Durham, NC 27705
919-401-7272
<http://lemur.duke.edu/>
Pronouns: she/her/hers

From: Lamberson, Amanda M <amanda_lamberson@fws.gov>
Sent: Friday, October 27, 2023 10:43 AM
To: Amanda Mazza <amanda.mazza@duke.edu>
Subject: Re: [EXTERNAL] RE: Incomplete Application - CITES/ESA CS0089413

Good morning Amanda,

Thank you for reaching out to Tierpark and for the SSP. I looked over the transaction page and

it does not provide the information we consider for a legal acquisition finding. This is a requirement for CITES. There is a mention of a shipment to the Lemur Conservation Foundation but otherwise the transfer appears to be undocumented in Species360. We will need a copy of a transaction agreement or other record like an APHIS Form 7020. If no documentation of the transfer was made or retained then we will need a letter from the Philadelphia Zoo providing details on the transfer and confirming Zoe's current location. Thank you.

Kind regards,

Amanda Lamberson
Biologist
U.S. Fish and Wildlife Service
Division of Management Authority
Branch of Permits, MS: IA
5275 Leesburg Pike
Falls Church, VA 22041

From: Amanda Mazza <amanda.mazza@duke.edu>
Sent: Thursday, October 26, 2023 4:50 PM
To: Lamberson, Amanda M <amanda_lamberson@fws.gov>
Subject: RE: [EXTERNAL] RE: Incomplete Application - CITES/ESA CS0089413

Hi Amanda,

I've attached the AZA SSP Population Analysis & Breeding and Transfer Plan and the transaction page from Species 360 for Zoe. I hope this helps.

I've forwarded your question about Tierpark's capacity to their curator. Once he responds I'll send that to you.

Let me know if you need anything else in the meantime.

Take care,
Amanda Mazza
Registrar/Data Manager
Duke Lemur Center
3705 Erwin Road
Durham, NC 27705
919-401-7272
<http://lemur.duke.edu/>
Pronouns: she/her/hers

From: Lamberson, Amanda M <amanda_lamberson@fws.gov>

Sent: Thursday, October 26, 2023 3:57 PM

To: Amanda Mazza <amanda.mazza@duke.edu>

Subject: Re: [EXTERNAL] RE: Incomplete Application - CITES/ESA CS0089413

Hi Amanda,

We need to request some further clarifying information. I understand Tierpark Berlin may or may not intend to transfer some of the lemurs to NaturZoo Rheine. Given the purpose of the import is for propagation and Tierpark Berlin would be at capacity with the import of the four lemurs, what actions would be taken once they exceed capacity or to prevent capacity from being exceeded? Regarding breeding, I am going to ask again for the AZA SSP plan for this species. It would be helpful for us to be able to have it for reference.

Lastly, I need to request documentation on the transfer of lemur #1317 (Zoe) from the Philadelphia Zoo to the Lemur Conservation Foundation. The Species360 report appears to indicate she was never transferred or that the report was not updated. Thank you.

Kind regards,

Amanda Lamberson

Biologist

U.S. Fish and Wildlife Service

Division of Management Authority

Branch of Permits, MS: IA

5275 Leesburg Pike

Falls Church, VA 22041

In accordance with 50 CFR 13.11(e), if the requested information is not received by this office within 45 calendar days of the date of this email, your application will be abandoned and administratively closed. Once a file is closed, you will need to submit a new application, and all required fees, for the Service to consider your proposed activity.

From: Amanda Mazza <amanda.mazza@duke.edu>

Sent: Wednesday, October 18, 2023 4:14 PM

To: Lamberson, Amanda M <amanda_lamberson@fws.gov>

Subject: RE: [EXTERNAL] RE: Incomplete Application - CITES/ESA CS0089413

Whoops! Sorry about that. Here's the updated permits for Zoe and Nacho. For real this time.

Amanda Mazza

Registrar/Data Manager

Duke Lemur Center

3705 Erwin Road

Durham, NC 27705
919-401-7272
<http://lemur.duke.edu/>
Pronouns: she/her/hers

From: Lamberson, Amanda M <amanda_lamberson@fws.gov>
Sent: Wednesday, October 18, 2023 4:10 PM
To: Amanda Mazza <amanda.mazza@duke.edu>
Subject: Re: [EXTERNAL] RE: Incomplete Application - CITES/ESA CS0089413

Hi Amanda,

I looked at the import permit and it appears to be the same one previously submitted, did you perhaps send the wrong attachment?

Kind regards,

Amanda Lamberson
Biologist
U.S. Fish and Wildlife Service
Division of Management Authority
Branch of Permits, MS: IA
5275 Leesburg Pike
Falls Church, VA 22041

From: Amanda Mazza <amanda.mazza@duke.edu>
Sent: Wednesday, October 18, 2023 10:24 AM
To: Lamberson, Amanda M <amanda_lamberson@fws.gov>
Subject: RE: [EXTERNAL] RE: Incomplete Application - CITES/ESA CS0089413

Hi Amanda,

Attached is the updated import permit for Zoe and Nacho.
Please let me know if you need anything else.

Thank you,
Amanda Mazza
Registrar/Data Manager
Duke Lemur Center
3705 Erwin Road
Durham, NC 27705
919-401-7272

<http://lemur.duke.edu/>

Pronouns: she/her/hers

From: Lamberson, Amanda M <amanda_lamberson@fws.gov>
Sent: Wednesday, October 11, 2023 4:13 PM
To: Amanda Mazza <amanda.mazza@duke.edu>
Subject: Re: [EXTERNAL] RE: Incomplete Application - CITES/ESA CS0089413

Hi Amanda,

Thanks for clarifying. We'll need copies of the German import permits that reflect that both the lemurs will be going to Tierpark instead then.

Kind regards,

Amanda Lamberson
Biologist
U.S. Fish and Wildlife Service
Division of Management Authority
Branch of Permits, MS: IA
5275 Leesburg Pike
Falls Church, VA 22041

From: Amanda Mazza <amanda.mazza@duke.edu>
Sent: Wednesday, October 11, 2023 4:01 PM
To: Lamberson, Amanda M <amanda_lamberson@fws.gov>
Subject: RE: [EXTERNAL] RE: Incomplete Application - CITES/ESA CS0089413

Hi Amanda,

Sorry for any confusion.

All 4 of the lemurs are going directly to Tierpark Berlin. Tierpark intends to quarantine and introduce the pairs at their facility with the hopes of breeding both pairs there as well. They will stay there for some time with the potential goal of sending them to NaturZoo Rheine. No time frame has been determined for that.

Amanda Mazza
Registrar/Data Manager
Duke Lemur Center
3705 Erwin Road
Durham, NC 27705
919-401-7272

<http://lemur.duke.edu/>

Pronouns: she/her/hers

From: Lamberson, Amanda M <amanda_lamberson@fws.gov>
Sent: Wednesday, October 11, 2023 3:39 PM
To: Amanda Mazza <amanda.mazza@duke.edu>
Subject: Re: [EXTERNAL] RE: Incomplete Application - CITES/ESA CS0089413

Hi Amanda,

I'm following up again as I realized there is a significant issue with the application. It was not made fully clear from the application that animals # 1303 (Nacho) and # 1317 (Zoe) were to be exported to NaturZoo Rheine and not Tierpark Berlin, given all the information for the Section E was provided only for Tierpark Berlin. Unfortunately we cannot issue one permit for two different receiving institutions. Unless the two animals are also going to Tierpark Berlin, which the German import permits will need to be amended to reflect, then a separate export application will be required. If they are not going to Tierpark Berlin, I cannot direct you to withdraw animals # 1303 and # 1317 from application CS0089413, but if you choose not to withdraw them then it is highly likely we will have to deny their export. Please let me know how you would like to proceed and if you have questions.

Kind regards,

Amanda Lamberson
Biologist
U.S. Fish and Wildlife Service
Division of Management Authority
Branch of Permits, MS: IA
5275 Leesburg Pike
Falls Church, VA 22041

In accordance with 50 CFR 13.11(e), if the requested information is not received by this office within 45 calendar days of the date of this email, your application will be abandoned and administratively closed. Once a file is closed, you will need to submit a new application, and all required fees, for the Service to consider your proposed activity.

From: Amanda Mazza <amanda.mazza@duke.edu>
Sent: Wednesday, October 11, 2023 12:07 PM
To: Lamberson, Amanda M <amanda_lamberson@fws.gov>
Subject: RE: [EXTERNAL] RE: Incomplete Application - CITES/ESA CS0089413

No problem! Thanks again


PHILADELPHIA ZOO
TRANSACTION CONFIRMATION FORM

PZ USDA # 23-C-0004
PZ AZA # 5463200

USDA # 58-C-1233
AZA # 4970000

TO: Lemur Conservation Foundation
P.O. Box 249
42500 73rd Avenue East
Myakka City, FL 34251

DATE: 24 January 2022

**THIS IS NOT AN INVOICE, MUST BE SIGNED &
RETURNED PRIOR TO SHIPMENT**

PHONE: (941) 322-8494

ATTN: Caitlin Kenney, Curator of Primates ckkenney@lemurreserve.org

From the Philadelphia Zoological Garden:

<u>Quantity</u>	<u>Species/ISIS #</u>	<u>Value Each</u>	<u>Value Total</u>
0.1	Mongoose lemur (<i>Eulemur mongoz</i>) PZ #105445 -- "Zoe" -- Regional studbook #1317	N/A	Donation

*** Yellow SSP breeding recommendation ***

TOTAL CASH	\$0.00
TOTAL OPEN EXCHANGE	\$0.00

To the Philadelphia Zoological Garden:

-- none --

Cash or credit due Philadelphia Zoo	\$0.00
Cash or credit due Lemur Conservation Foundation	\$0.00

Shipping arrangements will be made by Philadelphia Zoo, with costs paid by Lemur Conservation Foundation.

Crate(s) will be provided by Philadelphia Zoo. Unless other arrangements have been made, crate(s) must be returned (prepaid via common carrier) within 30 days of transfer.

Remarks: Preshipment veterinary requirements should be forwarded to Dr. Donna Ialeggio. Please include Michael Stern and Katelyn Wolf from in any communications regarding the transfer. Husbandry and medical records are fully shared in ZIMS; the ADTF will be available in ZIMS as a husbandry note.

I hereby affirm that I have read, understand, and agree to abide by all conditions enumerated on both sides of this transaction form. I also declare this transaction has been approved through my institution's acquisition/disposition process and sign this form as a duly authorized representative. Once this form has been signed by both parties, it is considered final; any changes to the terms or conditions must be agreed upon by both parties, in writing, prior to the transfer of the animal(s).

Accepted by:


Philadelphia Zoo

31-Mar-22
Date


Signature

31 / Mar / 2022
Date

Caitlin Kenney, Curator
Printed name, Title
Lemur Conservation Foundation

Please sign and return by e-mail -- eller.stephanie@phillyzoo.org

Alternatively, hard copies may be mailed to:
Stephanie Eller, Registrar, Philadelphia Zoo,
3400 W. Girard Ave., Philadelphia, PA 19104-1196

I have reviewed & agree to all conditions on the reverse of this document



All transactions are subject to the following conditions:

- The sender and the recipient both agree to abide by the AZA Code of Professional Ethics.
- The recipient agrees to care for the animal(s) appropriately. This means providing appropriate housing, food, husbandry care (such as enrichment, appropriate social groups, etc.), and veterinary care. Prior to transfer, the sender may request information and/or documentation to confirm that the recipient has the necessary facilities and expertise.
- The sender will provide the recipient with complete husbandry and medical records prior to transfer. If possible, the records will be shared within ZIMS; otherwise, PDF or hard copies of the records may be sent. The Animal Data Transfer Form should also be completed and sent to the recipient prior to transfer. The recipient should be given at least three days with the full records prior to shipment in order to fully review the data.
- The sender should confirm that the recipient is ready to receive prior to scheduling the shipment; the recipient must actively agree to the date of transfer.
- The recipient is responsible for the costs associated with transferring the animal(s). Animal transport costs normally include animal airfare, tolls, and fuel if the animal(s) are transported by ground vehicle more than 25 miles one way. Tolls and applicable fuel costs can be invoiced for both legs of the trip. Any additional costs must be approved by the recipient in writing prior to transfer, or the recipient can refuse to pay them.
- The recipient may hold off paying any invoices until they have received any documents that were requested prior to the shipment. The sender must send a formal invoice before any payments will be made. The recipient can refuse to pay for the animals if they arrive in poor condition, but will still pay for animal transport costs.
- If either institution is unable to agree with the above conditions, or if any of these conditions are not met prior to the transfer of the animals, then either institution is able to cancel the transfer without any penalties.

Statements of Ethical Standards

The Philadelphia Zoo is committed to upholding the highest level of ethical standards in animal care and management; the Zoo also expects its partners to do the same. Consequently, both parties in this transaction confirm that they agree with the following statements:

- ❖ We avoid any connection, no matter how indirect, with animal auctions or hunting ranches/facilities.
- ❖ Dispositions to non-accredited facilities or private individuals must be carefully evaluated to avoid public health risks or negative impacts on animal welfare or species conservation. Primates should never enter the pet trade.
- ❖ All activity must be compliant with local, state, national, and international laws and regulations and no activity should break the terms of loan agreements or other contracts.
- ❖ Research involving animals should mostly be observational, non-invasive, and non-terminal in nature. If invasive studies are warranted, the research proposal must be evaluated and approved by an IACUC or equivalent.

U.S. DEPARTMENT OF AGRICULTURE
ANIMAL AND PLANT HEALTH INSPECTION SERVICE

1. INVOICE NO.

N/A

2. PAGE

1 OF 1

RECORD OF ACQUISITION, DISPOSITION OR TRANSPORT
OF ANIMALS (Other Than Dogs and Cats)

☐ SALE ☐ EXCHANGE OR TRANSFER ☒ DONATION

3. DATE OF DISPOSITION

12 May 2022

INSTRUCTIONS: Complete applicable Items 1 through 13. Original and one copy to accompany animals. When delivery is made - Items 14 through 20 must be completed. Original retained by Buyer (Receiver) and copy one returned to Dealer (Seller or Donor). Copy two to be retained by Dealer (Seller or Donor). Attach Continuation Sheet (APHIS FORM 7020a) as needed.

4. DEALER'S LICENSE NO.

USDA# 23-C-0004

5. SELLER OR DONOR (Name and Address, include Zip Code)

Philadelphia Zoo
3400 West Girard Avenue
Philadelphia, PA 19104

5. BUYER OR RECEIVER (Name and Address, include Zip Code)

Lemur Conservation Foundation
42500 73rd Ave E.
Myakka City, FL 34251

7. USDA LICENSE NO. (If any) 58-C-1233

8. IDENTIFICATION OF ANIMALS BEING DELIVERED

B. NO. ANIMALS	D. INDIVIDUAL IDENT, TATTOOS, TAG NOS. <i>(if applicable)</i>	E. SPECIES	AGE - SEX				H. EST WEIGHT <i>(lbs.)</i>	I. REMARKS <i>(Condition, etc.)</i>	RECEIVER'S USE	
			F. NO. YOUNG		G. NO. ADULT				J.	K.
1	PZ#105445 “Zoe” AZA SB#1317	Mongoose lemur <i>Eulemur mongoz</i>	M	F	M	F				
			0	0	0	1				
			M	F	M	F				
			M	F	M	F				
			M	F	M	F				
			M	F	M	F				
			M	F	M	F				

DELIVERY BY COMMERCIAL CARRIER

9. DELIVERY BY ("X" one)

☐ Receiver's Truck

☐ Dealer's Truck

(Seller or Donor)

10. TRUCK LICENSE NO.

11. BILL OF LADING NO.

AWB#

006-86350655

12. NAME AND ADDRESS OF COMPANY OR FIRM

Delta Airlines Cargo

13. NAME AND ADDRESS OF TRUCK DRIVER

DELIVERY RECEIPT - TO BE COMPLETED BY BUYER OR RECEIVER

14. ANIMALS DELIVERED WERE ("X" one)

☒ IN APPARENT GOOD CONDITION

☐ POOR CONDITION

☐ REJECTED (Attach explanation for rejection)

15. TOTAL NUMBER RECEIVED

1

16. NUMBER DEAD

0

17. NUMBER ALIVE

1

18. BY (Signature)

19. TITLE

20. DATE

APHIS FORM 7020
(APR 93)

(Replaced VS FORM 18-20, which is now obsolete, and
APHIS Form 7020 (10-90) which may be used.)

ORIGINAL - BUYER'S COPY (Receiver)
COPY 1 - RETURN TO DEALER (Seller/Donor)
COPY 2 - DEALER'S COPY (Seller/Donor)



Zoologischer Garten Berlin | Hardenbergplatz 8 | 10787 Berlin

U.S. Fish and Wildlife Service

Zoologischer Garten Berlin AG
Hardenbergplatz 8
10787 Berlin
info@zoo-berlin.de
www.zoo-berlin.de
www.aquarium-berlin.de
www.tierpark-berlin.de

Unser Zeichen
py/py

Telefonnummer
+49 176 20535006

E-Mail
a.pauly@zoo-berlin.de

Datum
01.11.2023

Statement keeping mongoose lemurs (*Eulemur mongoz*) at Tierpark Berlin

To whom it may concern,

I would like to give you a statement, why Tierpark Berlin intends to import 2.2 mongoose lemurs from the Duke Lemur Center (North Carolina, USA).

1. The European population of mongoose lemurs is managed within the frame of an EEP (EAZA ex situ program). Currently this population is decreasing very fast because of the lack of births and breeding pairs. Therefore, the Prosimian TAG of EAZA asked the SSP for help. The SSP is now ready to send out two breeding pairs to Tierpark Berlin.
2. Of course, the intention is and was to breed with the new pairs within the EEP.
3. Tierpark Berlin will import the animals from the USA. Then, the lemurs must go through a quarantine period of six weeks at Tierpark Berlin.
4. The plan is to keep one pair at Tierpark Berlin. The other pair should be moved to another EAZA institution according to the recommendation of the EEP coordinator to expand the capacity for the European population in the future.
5. Currently Tierpark Berlin houses two pairs of mongoose lemurs. One of these pairs will be shipped to Cologne Zoo on 02.11.2023, because Tierpark Berlin would like to have the capacity for the new mongoose pairs from the USA.
6. In the future Tierpark Berlin can provide another existing facility for mongoose lemurs. Currently in this facility lives a pair of the critically endangered Roloway monkey (*Cercopithecus roloway*), which will be shipped in spring 2024 to another EAZA institution in the frame of the EEP. That means it is no problem to house 3 pairs of mongoose lemurs with their offspring at Tierpark Berlin in the future.
7. If the mongoose lemur population will increase, there is another option to house one more pair at Berlin Zoo (remark: the company "Zoologische Gärten Berlin" includes three institutions: Berlin Zoo, Zoo Aquarium Berlin and Tierpark Berlin).

Vorsitzender des Aufsichtsrates
Frank Bruckmann
Vorstand
Dr. Andreas Knieriem

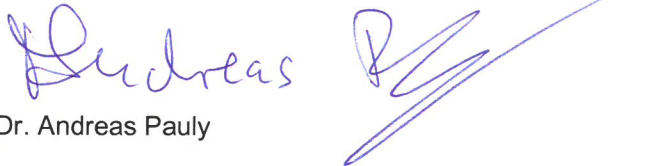
HR AG Charlottenburg HRB 4306 B
Steuernummer: 27/612/00636
VAT ID: DE 136782336

Commerzbank AG
IBAN: DE57100400000661234501
BIC: COBADEFFXXX

Berliner Volksbank eG
IBAN: DE28100900008848114007
BIC: BEVODE33XXX



With best regards,



Dr. Andreas Pauly

Head of Wildlife Health, Animal Welfare and Research
Veterinary specialist for zoo animals
Curator of primates (Tierpark Berlin)
EEP coordinator Coquerel's sifaka (*Propithecus coquereli*)
Veterinary advisor Prosimian TAG (EAZA)

ZOOLOGISCHER GARTEN BERLIN AG

Population Analysis & Breeding and Transfer Plan

Mongoose Lemur (*Eulemur mongoz*) AZA Species Survival Plan® Yellow Program



AZA Species Survival Plan® Coordinator
Gina M. Ferrie, Disney's Animal Kingdom®
(Gina.M.Ferrie@disney.com)

AZA Studbook Keeper
Tad Schoffner, Cleveland Metroparks Zoo
(tad@clevelandmetroparks.com)

AZA Adjunct Population Advisor
Gina M. Ferrie, Disney's Animal Kingdom®
(Gina.M.Ferrie@disney.com)

27 April 2021



Executive Summary

Species Survival Plan® for Mongoose lemur (*Eulemur mongoz*)

The current SSP population of mongoose lemurs is N = 58 animals (32 males; 26 females; 0 unknown sex) at 16 AZA institutions. This Population Analysis and Breeding and Transfer Plan was prepared December 2020 at Disney's Animal Kingdom®. The last Breeding and Transfer Plan for this species was finalized 9 November 2018. Analyses were based on the AZA Regional *Eulemur mongoz* Studbook (current to 1 September 2020) and were performed using ZIMS for Studbooks and PMx 1.6.20190628.

The target population size designated by the Prosimian Taxon Advisory Group is 65. This target size is based on the 2019 Prosimian TAG Regional Collection Plan. This population currently qualifies as a Yellow SSP.

Genetic diversity in this population is currently 88.98%. When gene diversity falls below 90% of that in the founding population, it is expected that reproduction will be increasingly compromised by, among other factors, lower birth weights and greater infant mortality. Gene diversity in 100 years is projected to be 68.4% (based on current statistics, assuming a target population of 65 and $\lambda = 1.022$). Equalizing the founder representation by breeding individuals from underrepresented lineages, increasing the effective size, and target population size could extend gene diversity retention.

While this population could likely grow larger and quicker than planned, space is being maintained for other *Eulemur* species as well, so the general goals of the TAG are limiting further growth at a quicker rate at this time. To retain 90% GD for 84 years (10 generations), one new founder would need to be incorporated every three years with a population of 65 individuals, which seems unlikely at this time.

Demography	
Current size of population (N) – Total (Males.Females.Unknown Sex)	58 (32.26.0)
Number of individuals excluded from the potentially breeding population	10 (6.4)
Population size following exclusions	48 (26.22.0)
Target population size (Kt) from the Prosimian TAG's 2019 RCP	65
Mean generation time (T; years)	8.4
Historical population growth rate (λ ; life table lambda 1964 – present) / 5-year from ZIMS census / Projected growth rate from PMx stochastic 20-year projections	1.022/ 1.013/ 0.983 <> 1.017 <> 1.043

Genetics		
	Current	Potential
Founders	14	---
Founder genome equivalents (FGE)	4.54	6.76
Gene diversity (GD %)	88.98%	92.60%
Population mean kinship (MK)	0.1102	---
Mean inbreeding (F)	0.0507	---
N_e/N (Effective population size/census size ratio)	0.3529	---
% Pedigree Known prior to assumptions and exclusions	100%	---
% Pedigree Known after assumptions and exclusions	100%	---
Projections		
	^h Historical/ Projected $\lambda = 1.022$	---
Years to 90% GD	0	---
Years to 10% loss of GD	39	---
Gene Diversity at 100 Years (%)	68.4%	---
Gene Diversity in 10 Generations (%)	71.4%	---
Generation time (T) and Target population size used in projections	$T=8.4 \times 10 = 84$ Target = 65	---

^hHistorical/Projected λ is population growth rate from demographic window (life table lambda, 1964 – 2019) and in the range of the 20 year stochastic projections in PMx.

Demographic analyses indicated that to increase the population size to 65 in 5 years, approximately 5–7 births are required ($\lambda = 1.02$) each year. To remain at the current size ($\lambda = 1.00$), approximately 5 births are needed in the next year. As with most SSP populations, pairings are prioritized to maintain or increase gene diversity through considerations of mean kinship, avoidance of inbreeding, differences in sire and dam mean kinships, and the degree of uncertainty within a pedigree.

Summary Actions: The SSP recommends 12 breeding pairs and 10 transfers for this period. Approximately 5–7 births per year are required each year to grow this population to a size of 65.

Mongoose Lemur (Eulemur mongoz) Yellow SSP 2021 Final

This Animal Program is currently a Yellow SSP and recommendations proposed are non-binding – participation is voluntary. Transfers to non-AZA facilities must comply with each facility's acquisition/transfer policy, in accordance with the AZA Policy on Responsible Population Management. APM Committee-approved Sustainability Partners are expected to agree and abide by AZA's Code of Professional Ethics, SSP Full Participation Policy, Policy on Responsible Population Management, and Accreditation Standards related to animal care and welfare.

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Acknowledgments

A master planning session was held 20 November 2020 through internet conferencing and was attended by Gina Ferrie (Disney's Animal Kingdom), Tad Schoffner (Cleveland Metroparks Zoo), Janine Steele (Sacramento Zoo), Christie Eddie (Omaha's Henry Doorly Zoo), Britt Keith (Duke Lemur Center), Caitlin Kenney (Lemur Conservation Foundation), Faye Gould (Zoo Miami), Susan Greathouse (Oglebay's Good Zoo) and others.

SSP Coordinator:

Gina M Ferrie, Disney's Animal Kingdom®, Gina.M.Ferrie@disney.com

Studbook Keeper:

Tad Schoffner, Cleveland Metroparks Zoo, tad@clevelandmetroparks.com

Cover photo courtesy of David Haring, Duke Lemur Center.

Report and Analyses prepared by:

Gina M. Ferrie, Adjunct Population Biologist, Disney's Animal Kingdom®, Gina.M.Ferrie@disney.com

**This plan was prepared and distributed with the assistance of the
AZA Population Management Center (pmc@lpzoo.org).**

This report, including analyses and specific recommendations, has been produced by the Adjunct PMC advisor listed on the title page.

Mongoose Lemur (Eulemur mongoz) Yellow SSP 2021 Final

This Animal Program is currently a Yellow SSP and recommendations proposed are non-binding – participation is voluntary. Transfers to non-AZA facilities must comply with each facility's acquisition/transfer policy, in accordance with the AZA Policy on Responsible Population Management. APM Committee-approved Sustainability Partners are expected to agree and abide by AZA's Code of Professional Ethics, SSP Full Participation Policy, Policy on Responsible Population Management, and Accreditation Standards related to animal care and welfare.

Description of Population Status

Species Survival Plan® for Mongoose Lemur (*Eulemur mongoz*)

Introduction: The Prosimian Taxon Advisory Group Regional Collection Plan (2019) designated the population to be managed as a Yellow SSP with a target size of 65 individuals. The current population consists of 58 individuals (32 males; 26 females; 0 unknown sex) distributed among 16 AZA institutions. This population currently qualifies as a Yellow SSP.

Comprehensive genetic and demographic analyses of the population were performed in November 2020 resulting in the current Breeding and Transfer Plan for the mongoose lemur SSP population. The last Breeding and Transfer Recommendations for this species was published 9 November 2018. Recommendations contained in this report represent the results of these analyses. Demographic and genetic analyses were performed on the AZA Regional Studbook (current to 1 September 2020) using ZIMS for Studbooks and PMx 1.6.20190628. The goal of these recommendations is to help ensure the genetic and demographic health of this population. Recommendations contained in this plan supersede those made in earlier plans.

Status and Conservation: Mongoose lemurs are endemic to the country of Madagascar and are currently listed as Critical by IUCN due to severely fragmented habitat, decline in the quality of habitat within the range of the species, and a decline in the number of mature individuals due to hunting and exploitation.

Analytical Population: The current population size is 58 (TAG recommended size = 65). No parental assumptions were used in this population due to a pedigree that is 100% known (Appendix A). Ten (6.4) individuals were excluded from the potentially breeding population due to advanced age and sterility (Appendix C). The population of potentially breeding animals following all exclusions is 48 (26.22.0).

Demography: Mongoose lemurs were first seen in North American zoos in the 1880s with imports to the Philadelphia Zoo. However, the population became established and reproduction began in the early to mid-1960s with imports of wild caught animals from Madagascar to both the Duke Lemur Center and the Philadelphia Zoo. Reproductive management for this species began in approximately 1991 and has been the longest, most consistent *Eulemur* species managed in North America. Since that time, births in the managed populations have been fairly regular. The AZA Regional population has displayed a general trend of increase since the early 1960s with an average growth rate of 2.2% (average λ from life table = 1.022; Figure 1). The population reached a peak of 70 animals in 1998 and 1999 but declined due to increased management, which reduced the number of breeding pairs to make space for other *Eulemur* species. Average growth for the last 15 years was slightly positive (average λ = 1.008), however as this population was recently determined to be the most sustainable and healthy *Eulemur*, in the last five years the growth rate has been increasing as more recommendations to breed have been made and the target size has increased (average λ = 1.013).

Mongoose Lemur (*Eulemur mongoz*) Yellow SSP 2021 Final

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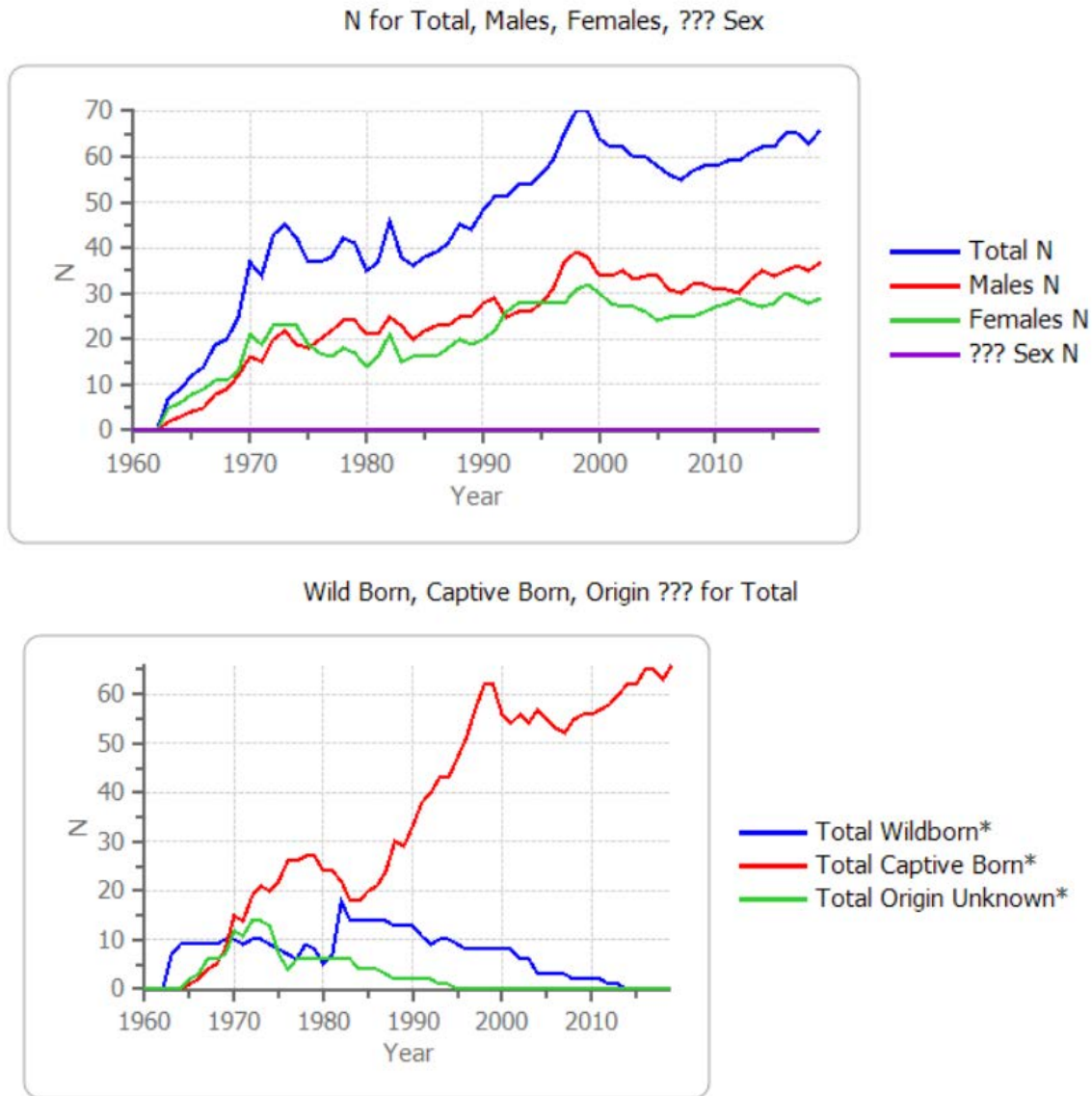


Figure 1. Census of mongoose lemur in AZA 1960 – 2019 by sex and by birth type.

The age distribution of the population reflects the slowing of reproduction more than a decade ago, with the sparse middle age classes with few animals in age classes 13–21. However, the population had an increase in births in the last 12 years with a decision by the TAG to allow this population to grow, and births have occurred each year since this time (Figure 2a). There are also multiple animals in the older age classes who are becoming reproductively senescent and have a lower success rate in reproduction, so reproduction in this population is planned with the goal to replace senescent individuals. Despite the years of inconsistent breeding, the age structure is slightly pyramidal in shape, representing a growing population.

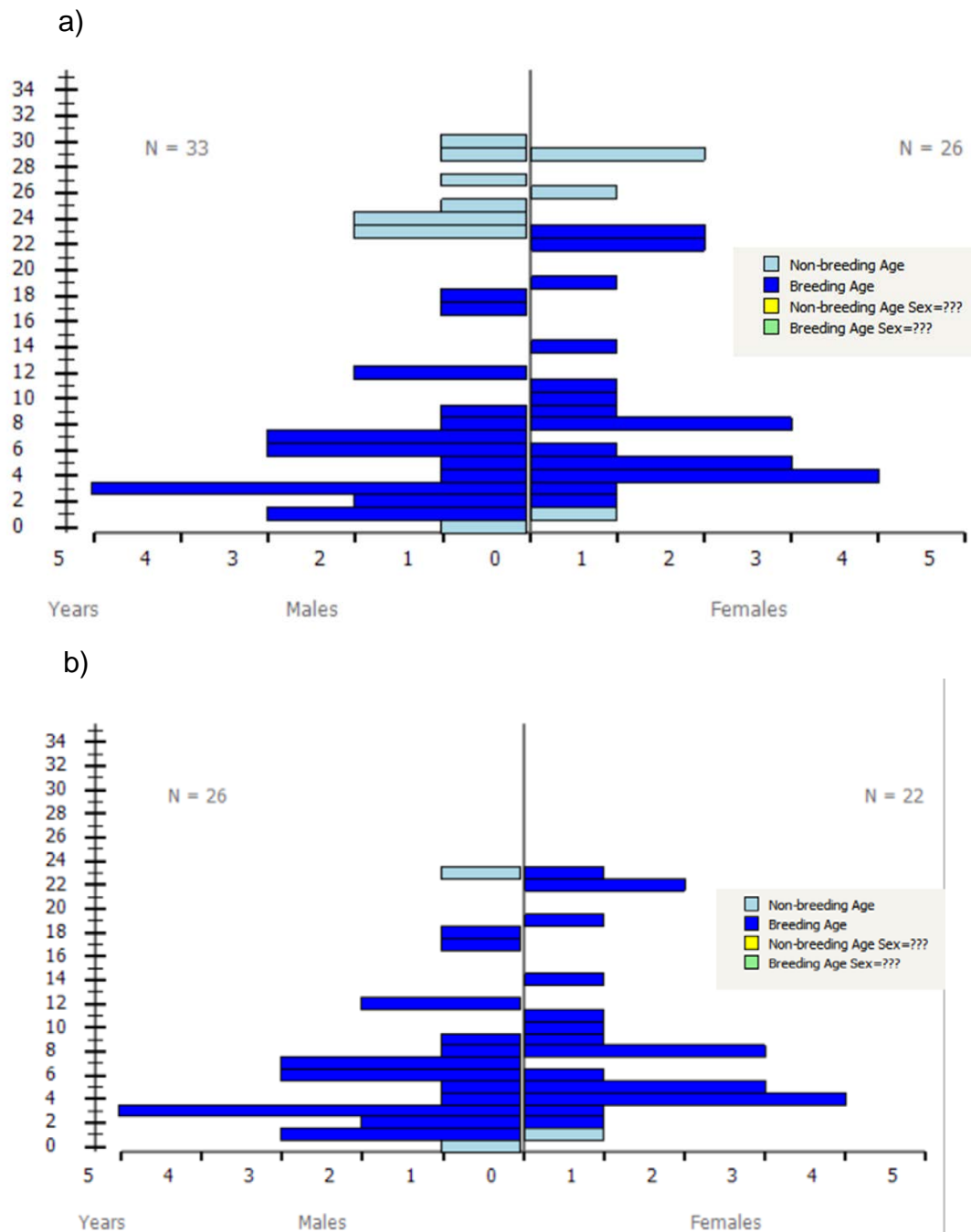


Figure 2. Age structure of the mongoose lemur population in AZA a) prior to and b) after genetic exclusions showing age classes 0–30 as of November 2020. Sterile and unknown sex animals appear half on both sides of the pyramid.

According to studbook records from 1964 – 2019, first year mortality in the AZA population is 28% for males and 29% for females. Males are sexually mature at less than 1.5 years of age and females become reproductively mature at slightly older than 2 years of age. In males, it appears that fecundity peaks at 6 years of age, and likely declines until senescence is reached at about age 21. In females, fecundity also seems to be greatest between the ages of 4–7, with a decline to approximately age 24. The oldest female to give birth in the North American population was 24 years old. The oldest male

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mongoose lemur was wild caught and died with an estimated age of at least 36 years. The oldest female mongoose lemur died at 34 and was zoo born. If a mongoose lemur survives its first birthday, its median life expectancy is 25.5 years for males and 20.4 years for females (Appendix F). Most mongoose lemurs give birth to one infant, but twins are not uncommon. Births take place between March – July with the peak in April.

Genetics: The current mongoose lemur population is descended from 14 founders and no potential founders remain. Given current population parameters, gene diversity is estimated to be approximately 88.98%. This is equivalent to approximately 5 unrelated individuals ($FGE = 4.54$). Population mean kinship ($MK = 0.1102$) and mean inbreeding ($F = 0.0507$) currently remain low in this population, at a measure related as approximately second cousins; however they are increasing each year. The ratio of N_e/N in this population (0.3529) is above average for monogamous species, and likely reflects the long-term reproductive management in this population, the semi-frequent re-pairing of individuals, and giving many pairs opportunities to breed.

Based on current statistics, at 100 years from present with a positive growth rate (historical $\lambda = 1.022$, with a target of $K_t = 65$), gene diversity is estimated at 68.4%. In 10 generations, or 84 years, gene diversity is estimated at 71.4%. When gene diversity falls below 90% of that in the founding population, it is expected that reproduction will be increasingly compromised by, among other factors, lower birth weights and greater infant mortality. To retain gene diversity for a longer period of time, pairings should be made in order to maintain or minimize low population mean kinship and mean inbreeding values and to equalize the founder representation (Figure 3).

While the current population cannot be maintained above 90% GD for 100 years, this goal could be attained by recruiting additional founders. By incorporating one new founder every three years for 100 years, and maintaining a population of at least 65 individuals, 90% GD can be maintained for 102 years at the historical growth rate ($\lambda = 1.022$). To maintain 90% GD for 84 years (10 generations), one new founder would need to be incorporated every three years. Incorporating one new founder every three years seems extremely unlikely, as the last founders to enter the population did so in 1982. While cooperation with Malagasy and European institutions is likely, at this point global management is being focused on other lemur species.

Genetics										
	2007	2010	2012	2013	2014	2015	2016	2018	2021	Potential
Founders	----	14	14	14	14	14	14	14	14	---
Founder genome equivalents (FGE)	6.31	5.88	5.50	5.25	5.20	5.14	5.03	4.72	4.54	6.76
Gene diversity (GD %)	92.1%	91.4%	90.91%	90.48%	90.38%	90.27%	90.06%	89.41%	88.98%	92.60%
Population mean kinship (MK)	0.079	0.085	0.0909	0.0952	0.0962	0.0973	0.0994	0.1059	0.1102	---
Mean inbreeding (F)	0.013	0.024	0.0280	0.0342	0.0366	0.0387	0.0453	0.0479	0.0507	---
N _e /N (Effective population size/census size ratio)	0.44	0.47	0.4304	0.4632	0.4400	0.4472	0.4681	0.3628	0.3529	---
% Pedigree Known prior to assumptions and exclusions	-----	-----	100%	100%	100%	100%	100%	100%	100%	---
% Pedigree Known after assumptions and exclusions	100%	100%	100%	100%	100%	100%	100%	100%	100%	---
Projections										
		^a Projected $\lambda = 1.00$	^b Projected $\lambda = 1.022$	^c Projected $\lambda = 1.0144$	^d Historical $\lambda = 1.022$	^e Historical $\lambda = 1.025$	^f Historical $\lambda = 1.028$	^g Historical/Projected $\lambda = 1.031$	^h Historical/Projected $\lambda = 1.022$	---
Years to 90% GD	-----	4	3	2	1	1	0	0	0	---
Years to 10% loss of GD	-----	43	52	52	56	57	59	45	39	---
Gene Diversity at 100 Years (%)	-----	69.4%	74.47%	73.9%	75.0%	75.1%	75.4%	70.9%	68.4%	---
Gene Diversity in 10 Generations (%)	-----	-----	75.95%	76.5%	77.6%	77.7%	77.9%	74.2%	71.4%	---
Generation time (T) and Target population size used in projections	-----	-----	T=8.5 x 10 = 85 Target = 70	T=8.3 x 10 = 83 Target = 75	T=8.2 x 10 = 82 Target = 75	T=8.2 x 10 = 82 Target = 75	T=8.1 x 10 = 81 Target = 75	T=8.0 x 10 = 80 Target = 75	T=8.4 x 10 = 84 Target = 65	---

^aProjected λ was used in 2010 for projections with PM2000.

^bProjected λ is population growth rate needed to grow population to target size in the next 10 years (by 2022).

^cProjected λ is population growth rate needed to grow population to target size in the next 10 years (by 2023).

^dHistorical λ is population growth rate from demographic window (life table lambda, 1964 – 2013) needed to grow population to target size in the next 7 years (by 2021).

^eHistorical λ is population growth rate from demographic window (life table lambda, 1964 – 2014) needed to grow population to target size in the next 6 years (by 2021).

^fHistorical/Projected λ is population growth rate from 20 year stochastic projections in PMx.

^gHistorical/Projected λ is population growth rate from demographic window (life table lambda, 1964 – 2017) and in the range of the 20 year stochastic projections in PMx.

^hHistorical/Projected λ is population growth rate from demographic window (life table lambda, 1964 – 2019) and in the range of the 20 year stochastic projections in PMx.

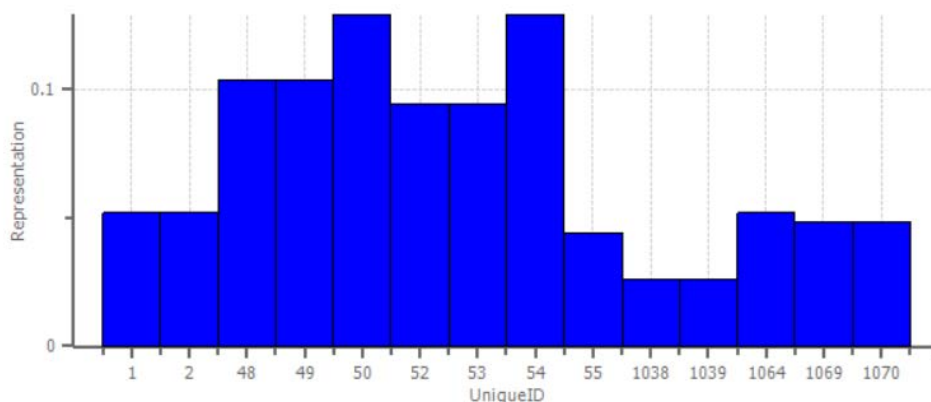


Figure 3. Founder representation graph illustrating the unequal distribution of founder lines in the mongoose lemur SSP population as of November 2020.

Mongoose Lemur (*Eulemur mongoz*) Yellow SSP 2021 Final

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Management Strategy: The current total population is 58 with a TAG recommended target of 65. According to demographic projections, approximately 5–7 births are needed each year to increase the population to the target size in five years. To simply maintain the population at its current size ($\lambda = 1.00$), approximately 5 births are required.

This is a 2-year plan (2021 – 2023). Another full set of recommendations will be produced in 2023 but interim recommendations will be made as needed. Please promptly report births and deaths to the Program Coordinator so that interim recommendations can be made as soon as possible.

To meet these goals, the SSP:

- 1) Recommends 12 breeding pairs for this plan.
 - All institutions are expected to hold offspring in their family groups as long as possible. The SSP's goal is to provide offspring with transfer and breeding recommendations when they turn two or three years old, although space challenges are currently prohibiting too many immediate transfers.
- 2) Recommends 10 transfers for this plan.
- 3) Requests that all institutions, particularly those with breeding recommendations, follow the weight guidelines for *Eulemur mongoz*.
 - Maintain weight (particularly of breeding individuals) between 1.4–1.6kg
 - Obtain weights at a minimum of once a month.
- 4) Recommendations about contraception options for females can be obtained from the AZA Reproductive Management Center at the Saint Louis Zoo (contraception@stlzoo.org or phone 314-646-4595).

Recommendation Outcomes: The website PMCTrack calculates the outcomes for SSP recommendations by comparing Breeding and Transfer Plan recommendations to births and deaths recorded in the studbook. Of the recommendations proposed in the 2018 Mongoose Lemur Breeding and Transfer Plan, 63% of the BREED WITH recommendations were fulfilled, and 33% of SEND TO recommendations were fulfilled as requested by 2020. There are many reasons that recommendations might not be fulfilled, including interim recommendations issued by the SSP Coordinator; these reasons can be captured using PMCTrack Outcomes Surveys. SSP participants are always encouraged to attempt to fulfill recommendations and to communicate successes and failures to the SSP Coordinator.

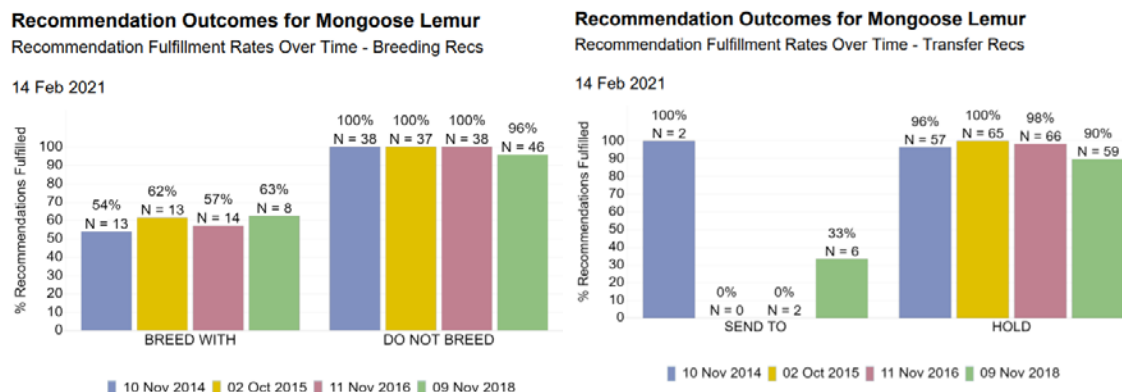


Figure 4. Recommendation outcome graphs by disposition (left) and breeding (right) for the past Mongoose Lemur SSP Breeding and Transfer Plans. *N* represents the number of recommendations scored for each recommendation type, per plan, and the number represents the percentage recommendations fulfilled. Please visit [PMCTrack.org](https://pmctrack.org) or contact pmctrack@lpzoo.org for more information or with any questions.

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Summary of Breeding and Transfer Recommendations

Sorted by Studbook Number

SB#	Location	Sex	Age	Disposition	Location	Breeding	With	Notes
110	DUKE PRIM	M	30	HOLD	DUKE PRIM	DO NOT BREED		Excluded due to age, reported dead while writing draft, will update in final plan
113	SEDGWICK	M	29	HOLD	SEDGWICK	DO NOT BREED		Excluded due to age
120	MEMPHIS	F	29	HOLD	MEMPHIS	DO NOT BREED		Excluded due to age
121	PHILADELP	F	29	HOLD	PHILADELP	DO NOT BREED		Excluded due to age
140	OMAHA	M	27	HOLD	OMAHA	DO NOT BREED		Excluded due to age
156	DENVER	M	25	HOLD	DENVER	SEE NOTES		Excluded due to age
1201	MYAKKACLR	F	26	HOLD	MYAKKACLR	DO NOT BREED		Excluded due to age
1204	MYAKKACLR	M	24	HOLD	MYAKKACLR	DO NOT BREED		Excluded due to age
1205	WHEELING	M	24	HOLD	WHEELING	DO NOT BREED		Excluded due to age
1212	OMAHA	F	23	HOLD	OMAHA	DO NOT BREED		Excluded, sterile
1215	PHILADELP	M	23	HOLD	PHILADELP	DO NOT BREED		Excluded, sterile
1217	DENVER	F	23	HOLD	DENVER	SEE NOTES		Genetically valuable, allow to breed if interested but unlikely based on age and health
1218	MYAKKACLR	M	23	HOLD	MYAKKACLR	BREED WITH	1274	Mis-matched pairing, male genetically valuable, female over-represented, breed for demographics
1222	WHEELING	F	22	HOLD	WHEELING	DO NOT BREED		Genetically valuable
1223	GLEN OAK	F	22	HOLD	GLEN OAK	BREED WITH	1281	Genetically valuable pairing
1253	SACRAMNTO	M	18	HOLD	SACRAMNTO	BREED WITH	1273	Genetically valuable pairing
1255	MYAKKACLR	F	19	HOLD	MYAKKACLR	BREED WITH	1311	Over-represented pairing, breed for demographics
1256	MYAKKACLR	M	17	HOLD	MYAKKACLR	DO NOT BREED		
1261	DUKE PRIM	F	14	HOLD	DUKE PRIM	BREED WITH	1263	Genetically valuable pairing
1263	DUKE PRIM	M	12	HOLD	DUKE PRIM	BREED WITH	1261	Genetically valuable pairing
1264	METROZOO	M	12	HOLD	METROZOO	BREED WITH	1288	Mis-matched pairing, male genetically valuable, female over-represented, breed for demographics
1266	SACRAMNTO	F	11	SEND TO	ATASCADER	DO NOT BREED		Companion for SB#1304, contraceptive
1267	DUKE PRIM	F	10	HOLD	DUKE PRIM	BREED WITH	1307	Over-represented pairing, breed for demographics
1268	JACKSONVL	F	8	HOLD	JACKSONVL	BREED WITH	1290	Genetically valuable pairing
1270	OMAHA	M	9	HOLD	OMAHA	DO NOT BREED		
1272	PHILADELP	F	8	HOLD	PHILADELP	DO NOT BREED		Contracept
1273	ST LOUIS	F	8	SEND TO	SACRAMNTO	BREED WITH	1253	Genetically valuable pairing
1274	MYAKKACLR	F	8	HOLD	MYAKKACLR	BREED WITH	1218	Mis-matched pairing, male genetically valuable, female over-represented, breed for demographics
1276	PHILADELP	M	8	SEND TO	ATASCADER	BREED WITH	1296	Mis-matched pairing, male genetically valuable, female over-represented, breed for demographics
1279	TOLEDO	M	7	HOLD	TOLEDO	DO NOT BREED		
1280	ST LOUIS	M	7	HOLD	ST LOUIS	DO NOT BREED		Companion for SB#1317
1281	GLEN OAK	M	7	HOLD	GLEN OAK	BREED WITH	1223	Genetically valuable pairing
1282	CLEVELAND	M	6	HOLD	CLEVELAND	DO NOT BREED		
1283	LVZOO	M	6	HOLD	LVZOO	BREED WITH	1291	Mis-matched pairing, male genetically valuable, female over-represented, breed for demographics
1284	MYAKKCLR	M	6	HOLD	MYAKKCLR	DO NOT BREED		

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SB#	Location	Sex	Age	Disposition	Location	Breeding	With	Notes
1285	MYAKKACLR	F	6	HOLD	MYAKKACLR	BREED WITH	1294	Over-represented pairing, breed for demographics
1287	CLEVELAND	F	5	HOLD	CLEVELAND	DO NOT BREED		Contracept or breed next year
1288	METROZOO	F	5	HOLD	METROZOO	BREED WITH	1264	Mis-matched pairing, male genetically valuable, female over-represented, breed for demographics
1290	JACKSONVL	M	5	HOLD	JACKSONVL	BREED WITH	1268	Genetically valuable pairing
1291	LVZOO	F	5	HOLD	LVZOO	BREED WITH	1283	Mis-matched pairing, male genetically valuable, female over-represented, breed for demographics
1293	MYAKKACLR	F	4	HOLD	MYAKKACLR	DO NOT BREED		Contracept
1294	MYAKKACLR	M	4	HOLD	MYAKKACLR	BREED WITH	1285	Over-represented pairing, breed for demographics
1295	TOLEDO	F	4	SEND TO	ST LOUIS	BREED WITH	1314	Contracept until transferred to breed, over-represented pairing, breed for demographics
1296	SACRAMNTO	F	4	SEND TO	ATASCADER	BREED WITH	1276	Mis-matched pairing, male genetically valuable, female over-represented, breed for demographics
1298	DUKE PRIM	F	4	HOLD	DUKE PRIM	DO NOT BREED		Contracept
1302	MYAKKACLR	F	3	HOLD	MYAKKACLR	DO NOT BREED		Contracept
1303	DUKE PRIM	M	3	HOLD	DUKE PRIM	DO NOT BREED		
1304	SACRAMNTO	M	3	SEND TO	ATASCADER	DO NOT BREED		Companion for SB#1266
1305	PHILADELP	M	3	HOLD	PHILADELP	DO NOT BREED		
1307	DUKE PRIM	M	3	HOLD	DUKE PRIM	BREED WITH	1267	Over-represented pairing, breed for demographics
1308	TOLEDO	M	3	HOLD	TOLEDO	DO NOT BREED		
1310	ST LOUIS	F	2	SEND TO	SANFORD	DO NOT BREED		Contracept
1311	MYAKKACLR	M	2	HOLD	MYAKKACLR	BREED WITH	1255	Over-represented pairing, breed for demographics
1312	PHILADELP	M	2	HOLD	PHILADELP	DO NOT BREED		
1313	MYAKKACLR	M	1	HOLD	MYAKKACLR	DO NOT BREED		
1314	MYAKKACLR	M	1	SEND TO	ST LOUIS	BREED WITH	1295	Transfer after he turns two, over-represented pairing, breed for demographics
1315	ST LOUIS	M	1	SEND TO	SANFORD	DO NOT BREED		
1317	PHILADELP	F	1	SEND TO	ST LOUIS	DO NOT BREED		Transfer after she turns two, contracept after transfer, companion for SB#1280
1318	METROZOO	M	0	HOLD	METROZOO	DO NOT BREED		

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Breeding and Transfer Recommendations by Institution

ATASCADER

Charles Paddock Zoo

Atascadero, CA

Note: This is a new organization to the SSP. Thanks for joining!

ID	Local ID	Sex	Age	House Name	Disposition	Location	Breeding	With	Notes
1266	101137	F	11	Caterina	RECEIVE FROM	SACRAMNTO	DO NOT BREED		Companion for SB#1304, contraceptive
1276	105140	M	8	Ernesto	RECEIVE FROM	PHILADELP	BREED WITH	1296	Mis-matched pairing, male genetically valuable, female over-represented, breed for demographics
1296	101241	F	4	Camilla	RECEIVE FROM	SACRAMNTO	BREED WITH	1276	
1304	101258	M	3	Murray	RECEIVE FROM	SACRAMNTO	DO NOT BREED		Companion for SB#1266

CLEVELAND

Cleveland Metroparks Zoo

Cleveland, OH

Note: This pair could breed if interested. May breed in 2021 – 2022 season. Discuss with SSP.

ID	Local ID	Sex	Age	House Name	Disposition	Location	Breeding	With	Notes
1282	190801	M	6	Oscar	HOLD	CLEVELAND	DO NOT BREED		
1287	200908	F	5	Rosalita	HOLD	CLEVELAND	DO NOT BREED		Contracept or breed next year

DENVER

Denver Zoological Garden

Denver, CO

ID	Local ID	Sex	Age	House Name	Disposition	Location	Breeding	With	Notes
156	A07402	M	25	Jose-Luis	HOLD	DENVER	SEE NOTES		Excluded due to age
1217	A07403	F	23	Adrianna	HOLD	DENVER	SEE NOTES		Genetically valuable, allow to breed if interested but unlikely based on age and health

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DUKE PRIM

Duke Lemur Center
Durham, NC

ID	Local ID	Sex	Age	House Name	Disposition	Location	Breeding	With	Notes
110	6390	M	30	Pedro	HOLD	DUKE PRIM	DO NOT BREED		Excluded due to age, reported dead while writing draft, will update in final plan
1261	6907	F	14	Maddie	HOLD	DUKE PRIM	BREED WITH	1263	Genetically valuable pairing
1263	3061	M	12	Duggan	HOLD	DUKE PRIM	BREED WITH	1261	
1267	6972	F	10	Carolina	HOLD	DUKE PRIM	BREED WITH	1307	Over-represented pairing, breed for demographics
1298	7244	F	4	Bonita	HOLD	DUKE PRIM	DO NOT BREED		Contracept
1303	7269	M	3	Nacho	HOLD	DUKE PRIM	DO NOT BREED		
1307	7374	M	3	Rico	HOLD	DUKE PRIM	BREED WITH	1267	Over-represented pairing, breed for demographics

GLEN OAK

Glen Oak Zoo
Peoria, IL

ID	Local ID	Sex	Age	House Name	Disposition	Location	Breeding	With	Notes
1223	M2002	F	22	Tamatave	HOLD	GLEN OAK	BREED WITH	1281	Genetically valuable pairing
1281	M2003	M	7	Pablo	HOLD	GLEN OAK	BREED WITH	1223	

GREEN NSC

Natural Science Center and Zoo, Inc.
Greensboro, NC

Note: Institution reported that they would like to add a breeding pair in future years based on construction schedule. Please continue discussions with SSP Coordinator to meet this request when you are ready.

JACKSONVL

Jacksonville Zoo and Gardens
Jacksonville, FL

ID	Local ID	Sex	Age	House Name	Disposition	Location	Breeding	With	Notes
1268	819316	F	8	Olivia	HOLD	JACKSONVL	BREED WITH	1290	Genetically valuable pairing
1290	819332	M	5	Ignacio	HOLD	JACKSONVL	BREED WITH	1268	

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LVZOO

Lehigh Valley Zoo
Schnecksville, PA

ID	Local ID	Sex	Age	House Name	Disposition	Location	Breeding	With	Notes
1283	LV0536	M	6	Mico	HOLD	LVZOO	BREED WITH	1291	Mis-matched pairing, male genetically valuable, female over-represented, breed for demographics
1291		F	5	Abby	HOLD	LVZOO	BREED WITH	1283	

MEMPHIS

Memphis Zoological Garden & Aquarium
Memphis, TN

Note: This individual is socially housed with another primate. Please contact SSP if you would like to receive more animals in the future.

ID	Local ID	Sex	Age	House Name	Disposition	Location	Breeding	With	Notes
120	19754	F	29	Ann	HOLD	MEMPHIS	DO NOT BREED		Excluded due to age

METROZOO

Zoo Miami
Miami, FL

Note: Allow pair to have one more offspring than discuss with SSP Coordinator whether to breed again or hold for the short term.

ID	Local ID	Sex	Age	House Name	Disposition	Location	Breeding	With	Notes
1264	19M004	M	12	Juanito	HOLD	METROZOO	BREED WITH	1288	Mis-matched pairing, male genetically valuable, female over-represented, breed for demographics
1288	19M005	F	5	Julieta	HOLD	METROZOO	BREED WITH	1264	
1318	20M025	M	0	Jose	HOLD	METROZOO	DO NOT BREED		

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MYAKKACLR

Lemur Conservation Foundation

Myakka City, FL

Note: Only breed recommended pairs based on ability to hold offspring for 2–3 years. SSP continues to search for placement for younger individuals.

ID	Local ID	Sex	Age	House Name	Disposition	Location	Breeding	With	Notes
1201	100080	F	26	Clarissa	HOLD	MYAKKACLR	DO NOT BREED		Excluded due to age
1204	100029	M	24	Felix	HOLD	MYAKKACLR	DO NOT BREED		Excluded due to age
1218	100062	M	23	Mercedes	HOLD	MYAKKACLR	BREED WITH	1274	Mis-matched pairing, male genetically valuable, female over-represented, breed for demographics
1255	100049	F	19	Kikeli	HOLD	MYAKKACLR	BREED WITH	1311	Over-represented pairing, breed for demographics
1256	100050	M	17	Bimbini	HOLD	MYAKKACLR	DO NOT BREED		
1274	100111	F	8	Leena	HOLD	MYAKKACLR	BREED WITH	1218	Mis-matched pairing, male genetically valuable, female over-represented, breed for demographics
1284	100101	M	6	Mateo	HOLD	MYAKKACLR	DO NOT BREED		
1285	100110	F	6	Luisa	HOLD	MYAKKACLR	BREED WITH	1294	Over-represented pairing, breed for demographics
1293	100122	F	4	Consuela	HOLD	MYAKKACLR	DO NOT BREED		Contracept
1294	100123	M	4	Javier	HOLD	MYAKKACLR	BREED WITH	1285	Over-represented pairing, breed for demographics
1302	100132	F	3	Mirabel	HOLD	MYAKKACLR	DO NOT BREED		Contracept
1311	100140	M	2	Julio	HOLD	MYAKKACLR	BREED WITH	1255	Over-represented pairing, breed for demographics
1313	100141	M	1	Lonzo	HOLD	MYAKKACLR	DO NOT BREED		
1314	100142	M	1	Felipe	SEND TO	ST LOUIS	BREED WITH	1295	Transfer after he turns two, over-represented pairing, breed for demographics

Mongoose Lemur (*Eulemur mongoz*) Yellow SSP 2021 Final

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OMAHA

Omaha's Henry Doorly Zoo

Omaha, NE

Note: SSP would like to pair SB#1270 for breeding in the future. Please contact SSP when you can accept a female to pair with him.

ID	Local ID	Sex	Age	House Name	Disposition	Location	Breeding	With	Notes
140	19554	M	27	Eduardo	HOLD	OMAHA	DO NOT BREED		Excluded due to age
1212	19555	F	23	Selena	HOLD	OMAHA	DO NOT BREED		Excluded, sterile
1270	100083	M	9	Andres	HOLD	OMAHA	DO NOT BREED		

PHILADELPHIA

Philadelphia Zoological Gardens

Philadelphia, PA

ID	Local ID	Sex	Age	House Name	Disposition	Location	Breeding	With	Notes
121	102654	F	29	Clara	HOLD	PHILADELPHIA	DO NOT BREED		Excluded due to age
1215	103432	s	23	Toby	HOLD	PHILADELPHIA	DO NOT BREED		Excluded, sterile
1272	101145	F	8	Natasha	HOLD	PHILADELPHIA	DO NOT BREED		Contracept
1276	105140	M	8	Ernesto	SEND TO	ATASCADER	BREED WITH	1296	Mis-matched pairing, male genetically valuable, female over-represented, breed for demographics
1305	104287	M	3	Bert	HOLD	PHILADELPHIA	DO NOT BREED		
1312	105362	M	2	Oscar	HOLD	PHILADELPHIA	DO NOT BREED		
1317	105445	F	1	Zoe	SEND TO	ST LOUIS	DO NOT BREED		Transfer after she turns two, contracept after transfer, companion for SB#1280

Mongoose Lemur (*Eulemur mongoz*) Yellow SSP 2021 Final

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SACRAMENTO

Sacramento Zoo

Sacramento, CA

ID	Local ID	Sex	Age	House Name	Disposition	Location	Breeding	With	Notes
1253	101052	M	18	Elmo	HOLD	SACRAMENTO	BREED WITH	1273	Genetically valuable pairing
1266	101137	F	11	Caterina	SEND TO	ATASCADER	DO NOT BREED		Companion for SB#1304, contraceptive
1273	65170	F	8	Dalia	RECEIVE FROM	ST LOUIS	BREED WITH	1253	Genetically valuable pairing
1296	101241	F	4	Camilla	SEND TO	ATASCADER	BREED WITH	1276	Mis-matched pairing, male genetically valuable, female over-represented, breed for demographics
1304	101258	M	3	Murray	SEND TO	ATASCADER	DO NOT BREED		Companion for SB#1266

SANFORD

Central Florida Zoological Park

Sanford, FL

Note: This is a new organization to the SSP. Thanks for joining!

ID	Local ID	Sex	Age	House Name	Disposition	Location	Breeding	With	Notes
1310	122511	F	2	Princess Buttercup	RECEIVE FROM	ST LOUIS	DO NOT BREED		Contracept
1315	124441	M	1	Mr. Hooper	RECEIVE FROM	ST LOUIS	DO NOT BREED		

SEDGWICK

Sedgwick County Zoo

Wichita, KS

Note: This individual is socially housed with ring-tailed lemurs. Please contact SSP if you would like to receive more animals in the future.

ID	Local ID	Sex	Age	House Name	Disposition	Location	Breeding	With	Notes
113	13507	M	29	Carlos	HOLD	SEDGWICK	DO NOT BREED		Excluded due to age

Mongoose Lemur (Eulemur mongoz) Yellow SSP 2021 Final

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ST LOUIS

Saint Louis Zoological Park

St. Louis, MO

Note: Organization would like to maintain two pairs in the long term with their new exhibit opening in 2021.

ID	Local ID	Sex	Age	House Name	Disposition	Location	Breeding	With	Notes
1273	65170	F	8	Dalia	SEND TO	SACRAMENTO	BREED WITH	1253	Genetically valuable pairing
1280	116643	M	7	Snuffy	HOLD	ST LOUIS	DO NOT BREED		Companion for SB#1317
1295	11529	F	4	Tiana	RECEIVE FROM	TOLEDO	BREED WITH	1314	Contracept until transferred to breed, over-represented pairing, breed for demographics
1310	122511	F	2	Princess Buttercup	SEND TO	SANFORD	DO NOT BREED		Contracept
1314	100142	M	1	Felipe	RECEIVE FROM	MYAKKACLR	BREED WITH	1295	Transfer after he turns two, over-represented pairing, breed for demographics
1315	124441	M	1	Mr. Hooper	SEND TO	SANFORD	DO NOT BREED		
1317	105445	F	1	Zoe	RECEIVE FROM	PHILADELPHIA	DO NOT BREED		Transfer after she turns two, contraceptive after transfer, companion for SB#1280

TOLEDO

Toledo Zoological Gardens

Toledo, OH

Note: This institution has requested to phase out of this species and the SSP will continue to look for placement options for remaining lemurs in the future.

ID	Local ID	Sex	Age	House Name	Disposition	Location	Breeding	With	Notes
1279	10374	M	7	Silvio	HOLD	TOLEDO	DO NOT BREED		
1295	11529	F	4	Tiana	SEND TO	ST LOUIS	BREED WITH	1314	Contracept until transferred to breed, over-represented pairing, breed for demographics
1308	12466	M	3	Sava	HOLD	TOLEDO	DO NOT BREED		

Mongoose Lemur (*Eulemur mongoz*) Yellow SSP 2021 Final

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WHEELING

Oglebay Good Children Zoo

Wheeling, WV

Note: No need to contracept, allow to breed if interested, but unlikely based on age and history.

ID	Local ID	Sex	Age	House Name	Disposition	Location	Breeding	With	Notes
1205	UNK	M	24	Felipe	HOLD	WHEELING	DO NOT BREED		Excluded due to age
1222	4243	F	22	Alana	HOLD	WHEELING	DO NOT BREED		Genetically valuable

Mongoose Lemur (Eulemur mongoz) Yellow SSP 2021 Final

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Appendix A

Pedigree Assumptions

No pedigree assumptions were used for the genetic analysis of this population as this population's pedigree is 100% known.

Appendix B

Summary of Data Exports

PMx Project: Mongoose Lemur 16 Nov 2020
Created: 2020-11-16 by PMx version 1.6.0.20190628
File: C:\PMxProjects\Mongoose Lemur 16 Nov 2020.pmxproj

Primary data file

Data File Name: zims.zims
Common Name: Mongoose lemur
Scientific Name: Eulemur mongoz
Data Source: ZIMS for Studbooks
Studbook Name: Lemur, Mongoose (Eulemur mongoz)
Exported On: 2020-11-16
Software version: ZIMS for Studbooks 3.0
Current Through: 2012-08-22
Compiled By: Tad K. Schoffner
Scope: AZA
Dates: 1964-01-01 to 2020-11-16
Location:
Association: AZA / Association of Zoos & Aquariums (AZA)
Other Filters: Status = Living
User: Gina M. Ferrie

Moves data file

Data File Name: demographic.csv
Common Name: Mongoose lemur
Scientific Name: Eulemur mongoz
Data Source: ZIMS for Studbooks
Studbook Name: Lemur, Mongoose (Eulemur mongoz)
Exported On: 2020-11-16
Software version: ZIMS for Studbooks 3.0
Current Through: 2012-08-22
Compiled By: Tad K. Schoffner
Scope: AZA
Dates: 1964-01-01 to 2020-11-16
Location:
Association: AZA / Association of Zoos & Aquariums (AZA)
Other Filters: Status = None
User: Gina M. Ferrie

Demographic input files

Census1 file: Exhcens.txt

46 births to parents with unknown ages have been added in proportion to known aged parents.
This is 23% of TOTAL births (N=198)

Selected population was changed from the originally imported data.

Data changes after studbook submitted:

Changes between draft and final:

Mongoose Lemur (Eulemur mongoz) Yellow SSP 2021 Final

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Appendix C

Animals Excluded from the Genetic Analysis

Summary of Exclusions: 10 (6.4)

Age: 8 (5.3)

Sterile: 2 (1.1)

SB#	Location	Sex	Age	Reason for Exclusion
110	DUKE PRIM	M	30	Age
113	SEDGWICK	M	29	Age
120	MEMPHIS	F	29	Age
121	PHILADELP	F	29	Age
140	OMAHA	M	27	Age
156	DENVER	M	25	Age
1201	MYAKKACLR	F	26	Age
1204	MYAKKACLR	M	24	Age
1205	WHEELING	M	24	Age
1212	OMAHA	F	23	Sterile
1215	PHILADELP	M	23	Sterile

Mongoose Lemur (Eulemur mongoz) Yellow SSP 2021 Final

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Appendix D Life Tables

*Birth flow was changed from continuous to pulse. Lemurs are strictly seasonal breeders and when comparing seasonality the distribution is significantly different from uniform ($\chi^2 = 480.06.76$, $df=11$, $p<0.05$).

Males									
Age (years)	Px	Mid Px	Qx	Risk Qx	Lx	Mx	Risk Mx	Ex	Vx
0	0.716	0.834	0.284	74.807	1.000	0.000	74.807	16.676	1.000
1	1.000	0.993	0.000	73.811	0.716	0.017	73.820	21.896	1.425
2	0.986	0.993	0.014	72.707	0.716	0.051	72.730	20.896	1.437
3	1.000	1.000	0.000	71.723	0.706	0.124	71.748	20.172	1.434
4	1.000	0.985	0.000	66.863	0.706	0.121	66.907	19.172	1.337
5	0.970	0.985	0.030	64.707	0.706	0.105	64.768	18.172	1.241
6	1.000	0.992	0.000	62.852	0.685	0.199	62.901	17.700	1.195
7	0.984	0.974	0.016	60.192	0.685	0.113	60.235	16.700	1.016
8	0.965	0.964	0.035	56.781	0.674	0.089	56.813	15.958	0.937
9	0.963	0.943	0.037	53.225	0.650	0.059	53.239	15.502	0.897
10	0.923	0.960	0.077	48.326	0.626	0.116	48.369	15.060	0.887
11	1.000	1.000	0.000	46.211	0.578	0.108	46.271	15.232	0.853
12	1.000	0.988	0.000	43.148	0.578	0.043	43.185	14.232	0.760
13	0.976	0.976	0.024	41.145	0.578	0.120	41.262	13.232	0.732
14	0.975	0.987	0.025	40.115	0.564	0.094	40.167	12.530	0.640
15	1.000	1.000	0.000	41.000	0.550	0.137	41.110	11.826	0.572
16	1.000	0.986	0.000	39.773	0.550	0.095	39.827	10.826	0.443
17	0.972	0.955	0.028	37.975	0.550	0.051	38.030	9.826	0.356
18	0.938	0.935	0.062	31.849	0.535	0.119	31.919	9.078	0.320
19	0.931	0.946	0.069	28.734	0.502	0.088	28.756	8.610	0.218
20	0.963	0.925	0.037	26.112	0.467	0.094	26.131	8.173	0.142
21	0.885	0.918	0.115	24.718	0.450	0.051	24.759	7.449	0.051
22	0.957	0.933	0.043	22.663	0.398	0.000	22.698	7.291	0.000
23	0.909	0.952	0.091	19.444	0.381	0.000	19.444	6.576	0.000
24	1.000	0.967	0.000	17.195	0.346	0.000	17.195	6.134	0.000
25	0.933	0.931	0.067	15.060	0.346	0.000	15.060	5.134	0.000
26	0.929	0.886	0.071	13.879	0.323	0.000	13.879	4.429	0.000
27	0.839	0.913	0.161	11.786	0.300	0.000	11.786	3.693	0.000
28	1.000	0.894	0.000	10.000	0.252	0.000	10.000	3.209	0.000
29	0.788	0.519	0.213	8.803	0.252	0.000	8.803	2.209	0.000
30	0.179	0.303	0.821	4.559	0.198	0.000	4.559	1.536	0.000
31	1.000	1.000	0.000	1.000	0.035	0.000	1.000	3.000	0.000
32	1.000	0.500	0.000	1.000	0.035	0.000	1.000	2.000	0.000
33	0.000	0.000	1.000	0.000	0.035	0.000	0.000	1.000	0.000
34	0.000	0.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000

Px = survival; Qx = mortality; Lx = cumulative survivorship; Mx = fecundity; Ex = life expectancy; Vx = expected future reproduction, At Risk (Qx and Mx) = number of animals corresponding values are estimated from.

r = 0.020

lambda = 1.021

T = 9.5

N = 33

N(at 20 yrs) = 41

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Females									
Age (years)	Px	Mid Px	Qx	Risk Qx	Lx	Mx	Risk Mx	Ex	Vx
0	0.712	0.826	0.288	72.240	1.000	0.000	72.240	15.012	1.000
1	0.986	0.979	0.014	68.367	0.712	0.000	68.367	19.687	1.439
2	0.971	0.978	0.029	68.271	0.702	0.108	68.314	18.957	1.494
3	0.985	0.985	0.015	65.984	0.681	0.176	66.040	18.490	1.462
4	0.985	0.984	0.015	63.937	0.671	0.215	63.971	17.755	1.336
5	0.983	0.974	0.017	57.638	0.661	0.161	57.677	17.008	1.165
6	0.965	0.982	0.035	55.474	0.650	0.221	55.532	16.280	1.045
7	1.000	0.991	0.000	54.356	0.627	0.215	54.412	15.841	0.875
8	0.982	0.961	0.018	52.847	0.627	0.128	52.891	14.841	0.675
9	0.939	0.969	0.061	46.871	0.616	0.053	46.904	14.097	0.570
10	1.000	0.988	0.000	45.668	0.578	0.135	45.717	13.945	0.564
11	0.977	0.964	0.023	43.205	0.578	0.073	43.231	12.945	0.440
12	0.951	0.962	0.049	40.208	0.565	0.094	40.237	12.230	0.385
13	0.974	0.972	0.026	37.038	0.537	0.050	37.053	11.806	0.313
14	0.971	0.985	0.029	34.860	0.523	0.035	34.873	11.098	0.277
15	1.000	0.984	0.000	32.455	0.508	0.038	32.462	10.404	0.255
16	0.968	0.967	0.032	31.507	0.508	0.079	31.518	9.404	0.222
17	0.967	0.965	0.033	29.241	0.491	0.041	29.310	8.684	0.152
18	0.964	0.945	0.036	27.414	0.475	0.000	27.414	7.949	0.117
19	0.924	0.941	0.076	25.951	0.458	0.071	26.003	7.207	0.125
20	0.958	0.936	0.042	23.389	0.423	0.000	23.391	6.714	0.060
21	0.913	0.886	0.087	21.786	0.406	0.029	21.788	5.963	0.064
22	0.857	0.892	0.143	18.162	0.370	0.000	18.162	5.435	0.039
23	0.933	0.891	0.067	14.619	0.318	0.000	14.619	5.174	0.046
24	0.846	0.833	0.154	11.978	0.296	0.051	11.988	4.473	0.051
25	0.818	0.793	0.182	10.337	0.251	0.000	10.337	4.104	0.000
26	0.762	0.793	0.238	7.921	0.205	0.000	7.921	3.794	0.000
27	0.833	0.909	0.167	5.416	0.156	0.000	5.416	3.667	0.000
28	1.000	0.700	0.000	5.000	0.130	0.000	5.000	3.200	0.000
29	0.400	0.571	0.600	2.647	0.130	0.000	2.647	2.200	0.000
30	1.000	1.000	0.000	1.000	0.052	0.000	1.000	3.000	0.000
31	1.000	0.500	0.000	1.000	0.052	0.000	1.000	2.000	0.000
32	0.000	0.000	1.000	0.153	0.052	0.000	0.153	1.000	0.000
33	0.000	0.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000

Px = survival; Qx = mortality; Lx = cumulative survivorship; Mx = fecundity; Ex = life expectancy; Vx = expected future reproduction, At Risk (Qx and Mx) = number of animals corresponding values are estimated from.

$r = 0.024$

$\lambda = 1.024$

$T = 7.3$

$N = 26$

$N(\text{at } 20 \text{ yrs}) = 41$

Mongoose Lemur (*Eulemur mongoz*) Yellow SSP 2021 Final

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Appendix E

Ordered Mean Kinship

Note: This list is current to November 2020 and is based on studbook data with pedigree assumptions. Values are subject to change with any birth, death, import, export, inclusion, or exclusion. Unknown sexed animals appear on both the male and female side of the mean kinship list. Gray highlights are individuals with breeding recommendations in this plan.

Average Population MK = 0.1102

Males

SB#	MK	%Known	Age	Location
1264	0.0982	100%	12	METROZOO
1283	0.0985	100%	6	LVZOO
1290	0.0985	100%	5	JACKSONVL
1253	0.1019	100%	18	SACRAMNTO
1218	0.1021	100%	23	MYAKKACLR
1276	0.1060	100%	8	PHILADELP
1263	0.1107	100%	12	DUKE PRIM
1270	0.1108	100%	9	OMAHA
1281	0.1108	100%	7	GLEN OAK
1307	0.1108	100%	3	DUKE PRIM
1314	0.1108	100%	1	MYAKKACLR
1318	0.1115	100%	0	METROZOO
1294	0.1136	100%	4	MYAKKACLR
1311	0.1136	100%	2	MYAKKACLR
1313	0.1136	100%	1	MYAKKACLR
1304	0.1138	100%	3	SACRAMNTO
1308	0.1156	100%	3	TOLEDO
1256	0.1160	100%	17	MYAKKACLR
1284	0.1172	100%	6	MYAKKACLR
1282	0.1176	100%	6	CLEVELAND
1303	0.1176	100%	3	DUKE PRIM
1315	0.1186	100%	1	ST LOUIS
1280	0.1188	100%	7	ST LOUIS
1305	0.1188	100%	3	PHILADELP
1312	0.1188	100%	2	PHILADELP
1279	0.1224	100%	7	TOLEDO

Females

SB#	MK	%Known	Age	Location
1222	0.0697	100%	22	WHEELING
1217	0.0759	100%	23	DENVER
1223	0.0812	100%	22	GLEN OAK
1268	0.0987	100%	9	JACKSONVL
1261	0.1008	100%	14	DUKE PRIM
1273	0.1081	100%	8	ST LOUIS
1285	0.1108	100%	6	MYAKKACLR
1287	0.1108	100%	5	CLEVELAND
1255	0.1135	100%	19	MYAKKACLR
1291	0.1138	100%	5	LVZOO
1296	0.1138	100%	4	SACRAMNTO
1267	0.1145	100%	10	DUKE PRIM
1274	0.1146	100%	8	MYAKKACLR
1266	0.1155	100%	11	SACRAMNTO
1295	0.1156	100%	4	TOLEDO
1288	0.1162	100%	5	METROZOO
1293	0.1172	100%	4	MYAKKACLR
1302	0.1172	100%	3	MYAKKACLR
1298	0.1176	100%	4	DUKE PRIM
1310	0.1186	100%	2	ST LOUIS
1317	0.1188	100%	1	PHILADELP
1272	0.1213	100%	8	PHILADELP

Mongoose Lemur (Eulemur mongoz) Yellow SSP 2021 Final

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Appendix F

Descriptive Survival Statistics Report

Mongoose lemur Studbook
Eulemur mongoz
North American regional Studbook

Studbook data current as of 9/01/2020 12:00:00 AM

Compiled by
Tad K. Schoffner

PopLink Studbook filename: Mongoose_27Dec2020
PopLink User Who Exported Report: Gina Ferrie
Date of Export: 12/27/2020 12:00:00 AM
Data Filtered by: Association = AZA.FED AND StartDate = 1/1/1964 AND EndDate = 12/27/2020
PopLink Version: 2.5.2

REPORT OVERVIEW:

Based on this analysis, if a Mongoose lemur survives to its first birthday, its median life expectancy is 25.5 years for males and 20.4 years for females. Please see the body of the report for more details.

BACKGROUND ON ANALYSES:

These analyses were conducted using animals that lived during the period 1 January 1964 to 27 December 2020 at institutions within AZA. The analyses mainly focus on survival statistics from 1 year (e.g. excluding any individuals that did not survive past their first birthday). These statistics most accurately reflect typical survival for animals which can be seen on exhibit in zoos and aquariums.

This report summarizes survival records of individuals housed at zoological facilities for a specific geographic range and time period; these records trace an individual's history from birth or entry into the population to death, exit out of the population, or the end of the time period. As such, this history only reflects standard practices - including management, husbandry, and acquisition/disposition practices - for the specified time period and geographic range. Thus, the report contents should be viewed with some caution as they may not fully reflect current and newly emerging zoo and aquarium management techniques or practices. For example, if the population has not been maintained in zoos and aquariums long enough to have many adults living into old age, median life expectancy will likely be an underestimate until more data accrue in older age classes. Thus, users of these reports should recognize that the results produced will likely vary over time or depending on the subset of data selected.

For many species, including humans, survival statistics often differ for males and females. For this population, male and female data were robust enough to detect statistical differences¹ in survival statistics. These results therefore include separate statistics for males and females; individuals whose sex is unknown are proportionally included in calculations.

SUMMARY OF ANALYSES:

SURVIVAL STATISTICS

	Female	Male
# of individuals with partial or full lifespans used in analysis	103	108
# of individuals which had died by 27 December 2020 (analysis end date)	56	49
% of individuals which had died by 27 December 2020	54.4%	45.4%
median life expectancy assuming an individual survives to its first birthday (years)	20.4	25.5
95% confidence interval for median (years)	16.7 to 22.5	21.4 to 27.8

Mongoose Lemur (*Eulemur mongoz*) Yellow SSP 2021 Final

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only 25% of animals live beyond this age (years)	25.6	30.3
First-year (infant) survival	75.6%	75.7%
maximum longevity (years)	34.1	36.1

See footnotes 1, 2, 3, 4, and 5 for definitions of terminology used in this table.

The **median life expectancy**² for Mongoose lemur was statistically different between males and females, with **males having a significantly higher median life expectancy**. Given the quality of the data - how many animals are in the database and how many have died - there is a 95% chance that the true median for each sex falls within the 95% confidence intervals displayed in the table.

The table also lists the ages which only 25% of Mongoose lemur can be expected to survive past and the first-year (infant) survival³ rates. The year after birth/hatching is a period of relatively low survival for many species and life histories.

The **maximum longevity**⁴ observed for Mongoose lemur females is based on an individual which was DEAD as of the analysis end date (studbook number 1041, sex = Female, origin = Captive Born, birth date estimate = None). The maximum longevity observed for Mongoose lemur males is based on an individual which was DEAD as of the analysis end date (studbook number 55, sex = Male, origin = Wild Born, birth date estimate = None).⁵

The correct interpretation of these statistics is that, if it survives the first year of life, the 'typical' male Mongoose lemur will live 25.5 years and the typical female will live 20.4 years; that half of all Mongoose lemur can be expected to die before they reach the male and female median life expectancies and half will live longer than that; that only 25% of all male Mongoose lemur can be expected to live to 30.3 years and females to 25.6 years; and that it is rare but possible for male Mongoose lemur to live 36.1 years and female Mongoose lemur to live 34.1 years.

The median life expectancy, confidence interval, first-year survival, and maximum longevity may change as more data are accumulated, the population's age structure changes, or management practices improve.

While both median life expectancy and maximum longevity are discussed in this report, it is more appropriate to rely on median life expectancy to place the age of any one individual in context. To put these statistics in perspective, median life expectancy from age one for people in the United States is 77.5 years and the maximum longevity (documented worldwide) is 122 years⁶. Therefore, if a person lived to be 85 years old, the appropriate context is that they lived well beyond the median life expectancy (77.5), not that they fell short of the maximum longevity (122).

DATA QUALITY

The PopLink Survival Tool uses five data quality measures to determine whether data are robust enough to make reliable estimates of key survival parameters. **The subsets of male and female data for this population passed all of the following data quality tests:**

1. Can the median life expectancy be calculated? **PASS**
2. Is the sample size (number of individuals at risk) greater than 20 individuals at the median? **PASS**
3. Is the 95% Confidence Interval (CI) bounded? **PASS**
4. Is the sample size in the first age class of analysis (e.g. the first day of analysis) greater than 30 individuals? **PASS**
5. Is the length of the 95% CI < 33% of the maximum longevity? **PASS**

PopLink data validation was last run on 10/16/2020. This validation found 25 errors, including 4 high priority errors, 20 medium priority errors, and 1 low priority errors. These errors may or may not directly affect the data in this analysis.

¹ Statistical significance was determined by comparing 84% confidence intervals around median life expectancy for males and females, with 0 unknown sex individuals proportionally incorporated into the analysis. For this population, non-overlapping confidence intervals indicated that male and female medians were significantly different. See the PopLink manual for more details.

² The statistics analyzed for this report (median life expectancy, 95% confidence limits, and age to which 25% of individuals survive) exclude any individuals who did not survive to their first birthday; these individuals are excluded because this Report is focused on providing median survival estimates for the typical individual that survives the

vulnerable infant stage. In other words, this report answers the question, 'how long is this species expected to live once it has reached its first birthday?' For this studbook, 57 individuals died before their first birthday and were excluded from these analyses.

For all animals that survive to their first birthday, 50% will die before the median life expectancy in this report and 50% die after. Note that the median life expectancy obtained from population management software (PM2000, PMx, ZooRisk) or from life tables in Breeding and Transfer Plans (e.g. where $L_x = 0.5$) will be lower because it includes these individuals that did not survive to their first birthday in order to project the correct number of births needed. See the PopLink manual for more details.

³For reference, first-year survival is provided. For this studbook and the selected demographic window, 57 individuals did not survive to their first birthday and were excluded from the estimates provided above (median life expectancy, 95% confidence limits, and age to which 25% of individuals survive).

⁴ Maximum longevity is the age of the oldest known individual for this species, living or dead. It is not necessarily the biological maximum age, but only reflects the individuals included in the dataset.

⁵ Censored individuals are individuals whose deaths have not been observed as of the end of the analysis window, including individuals who 1) are still alive as of the end date, 2) exited the geographic window before the end date (through transfer or release), or 3) were lost-to-follow up before the end date.

⁶ Median life expectancy for people is estimated from: Xu, Jiaquan, Kochanek KD, Murphy SL, and Tejada-Vera B. 2007. Deaths: Final Data for 2007. National vital statistics reports; vol 58 no 19. Hyattsville, MD: National Center for Health Statistics. Jeanne Calment of France was the oldest documented and fully validated human and died at 122 years and 164 days; from: <http://www.grg.org/Adams/Tables.htm>. Accessed August 9, 2007.

Mongoose Lemur (Eulemur mongoz) Yellow SSP 2021 Final

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Appendix G

Definitions

Management Terms (as of January 2019)

Green Species Survival Plan® (Green SSP) Program – A Green SSP Program has a population size of 50 or more animals and is projected to retain 90% gene diversity for a minimum of 100 years or 10 generations. Green SSP Programs are subject to AZA's Full Participation and Sustainability Partner Policies.

Yellow Species Survival Plan® (Yellow SSP) Program – A Yellow SSP Program has a population size of 50 or more animals but cannot retain 90% gene diversity for 100 years or 10 generations. Yellow SSP participation by AZA facilities is voluntary. Yellow SSP Programs are subject to AZA's Sustainability Partner Policy.

Red Species Survival Plan® (Red SSP) Program – A Red SSP Program has a population size of twenty or more animals managed among three or more participating AZA facilities. If a population does not meet these minimum criteria, but has an IUCN designation of Critically Endangered, Endangered, or Extinct in the Wild, and the TAG has developed three goals to sustain this population, then the population will be considered a Red SSP Program. Red SSPs cannot retain 90% gene diversity for 100 years or 10 generations and participation by AZA facilities is voluntary. Red SSP Programs are subject to AZA's Sustainability Partner Policy.

Sustainability Partners – AZA Wildlife Conservation and Management Committee (WCMC) approved wildlife facilities that regularly exchange animals with AZA-accredited facilities and certified related facilities, typically as part of the Species Survival Plan® (SSP) Program Breeding and Transfer Plan or other SSP Program management process.

Full Participation – AZA policy stating that all AZA accredited facilities and certified related facilities having a Green SSP animal in their collection are required to participate in the collaborative SSP planning process (e.g., provide relevant animal data to the AZA Studbook Keeper, assign an Institutional Representative who will communicate facility wants and needs to the SSP Coordinator and comment on the draft plan during the 30-day review period, and abide by the recommendations agreed upon in the final plan).

All AZA member facilities and Animal Programs, regardless of management designation, must adhere to the AZA Policy on Responsible Population Management and the AZA Code of Professional Ethics. For more information on AZA policies, see <https://www.aza.org/board-approved-policies-and-position-statements>.

Demographic Terms

Age Distribution – A visual representation of the numbers or percentages of individuals in various age and sex classes.

Ex, Life Expectancy – The average years of further life for an animal in age class x.

Lambda (λ) or Population Growth Rate – The proportional change in population size from one year to the next. Lambda can be based on life-table calculations (the projected lambda) or from observed changes in population size from year to year. A lambda of 1.11 means an 11% per year increase; a lambda of 0.97 means a 3% decline in size per year. The three lambdas highlighted in this BTP are: 1) Life Table, from the PMx life tables, based on the demographic regional and date window exported from the studbook; 2) 5-year, from the studbook census; and 3) Projected, from the PMx stochastic 20 year projections.

lx, Age-Specific Survivorship – The probability that a new individual (e.g., age 0) is alive at the *beginning* of age x. Alternatively, the proportion of individuals which survive from birth to the beginning of a specific age class.

Mean Generation Time (T) – The average time elapsing from reproduction in one generation to the time the next generation reproduces. Also, the average age at which a female (or male) produces offspring. It is not the age of first reproduction. Males and females often have different generation times.

Median Life Expectancy (MLE) – The 'typical' age at which an average animal is expected to live, excluding those that were born and died on the same day. This is the age at which $L_x = 0.5$, meaning that 50% are expected to die before that age and 50% after that age. A Survival Statistics Library is maintained for most AZA Animal Programs on the AZA website: <https://www.aza.org/species-survival-statistics>

Maximum Longevity – The maximum age at which we have observed a species to live. If the oldest observed animal is currently living, we do not yet know the maximum longevity.

Mx, Fecundity – The average number of same-sexed offspring born to animals in that age class. Because studbooks typically have relatively small sample sizes, studbook software calculates Mx as 1/2 the average number of offspring born to animals in that age class.

Mongoose Lemur (Eulemur mongoz) Yellow SSP 2021 Final

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This provides a somewhat less "noisy" estimate of M_x , though it does not allow for unusual sex ratios. The fecundity rates provide information on the age of first, last, and maximum reproduction.

P_x, Age-Specific Survival – The probability that an individual of age x survives an age class; is conditional on an individual being alive at the beginning of the age class. Alternatively, the proportion of individuals that survive from the beginning of one age class to the next.

Q_x, Mortality – The probability that an individual of age x dies during an age class ($Q_x = 1 - P_x$). Alternatively, the proportion of individuals that die during an age class. It is calculated from the number of animals that die during an age class divided by the number of animals that were alive at the beginning of the age class (i.e., "at risk").

Risk (Q_x or M_x) – The number of individuals that have lived during an age class. The number "at risk" is used to calculate M_x and Q_x by dividing the number of births and deaths that occurred during an age class by the number of animals at risk of dying and reproducing during that age class.

Target Population Size (TPS) – The desired number of SSP animals to be held across AZA and approved partner facilities over a specific, stated timeframe. This number is determined with consideration for program roles and goals (genetic, demographic, and others), logistical constraints, spatial competition with other TAG-managed species, and other population-specific concerns. Target Population Size is determined by the Taxon Advisory Group (TAG) and published in their Regional Collection Plan (RCP).

V_x, Reproductive Value – The expected number of offspring produced this year and in future years by an animal of age x .

Genetic Terms

Allele – Alternate forms of DNA at a particular position in a genome (genetic locus). Alleles represent the most basic form of genetic diversity.

Gene Diversity (GD) – The probability that two alleles randomly sampled from the same genetic locus across a population are not identical by descent. Gene diversity is calculated relative to a population's founders, which are assumed to be unrelated and not inbred, and is the proportional diversity retained by the current, descendant population.

Effective Population Size (Inbreeding N_e) – The size of a randomly mating population of constant size with equal sex ratio and a Poisson distribution of family sizes that would (a) result in the same mean rate of inbreeding as that observed in the population, or (b) would result in the same rate of random change in allele frequencies (genetic drift) as observed in the population. These two definitions are identical only if the population is demographically stable (because the rate of inbreeding depends on the distribution of alleles in the parental generation, whereas the rate of allele frequency drift is measured in the current generation).

Founder – An individual obtained from a source population (often the wild) that has no known relationship to any individuals in the derived population (except for its own descendants).

Founder Genome Equivalents (FGE) – The number of wild-caught individuals (founders) that represent the same amount of gene diversity as does the population under study. The gene diversity of a population is $1 - 1 / (2 * FGE)$.

Founder Representation – The proportion of the alleles in the living, descendant population that are derived from that founder.

Inbreeding Coefficient (F) – The probability that the two alleles present at an individual's genetic locus are identical by descent (i.e., both alleles originated from an ancestor common to both the individual's parents).

Mean Kinship (MK) – The mean (or average) kinship coefficient between an animal and all animals (including itself) in the living, captive-born population. An individual's mean kinship is a measure of how well its alleles are represented within a population. Animals with low mean kinships have few relatives, are from under-represented founder lineages, and have transmitted few of their alleles to the next generation; these individual should be prioritized for breeding to slow a population's gene diversity loss.

Percent Known – The percentage of an animal's genome that is traceable to known founders. Thus, if an animal has an UNK sire, its % Known = 50. If it has an UNK grandparent, its % Known = 75.

Percent Certain – The percentage of the living individuals' pedigree that can be completely identified as *certain*: (exact identity of both parents is known) and traceable back to known founders. Individuals that are 100% *certain* do not have any MULTs or UNKs in their pedigree. *Certainty* represents a higher degree of knowledge than *Known* and therefore is always less than or equal to *Known*.

Mongoose Lemur (*Eulemur mongoz*) Yellow SSP 2021 Final

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Appendix H

Directory of Institutional Representatives

Contact Name (IR)	Institution	Email	Phone
Alan Baker	ATASCADER - Charles Paddock Zoo, Atascadero, CA	abaker@atascadero.org	
Tad Schoffner	CLEVELAND - Cleveland Metroparks Zoo, Cleveland, OH	tad@clevelandmetroparks.com	216-635-3332
Marcia Salverson	DENVER - Denver Zoological Gardens, Denver, CO	msalverson@denverzoo.org	719-213-3328
Britt Keith	DUKE PRIM - Duke Lemur Center, Durham, NC	britt.keith@duke.edu	919-401-7221
Dawn Petefish	GLEN OAK - Peoria Zoo in Glen Oak Park, Peoria, IL	dpetefish@peoriazoo.org	309-681-3501
Jessica Hoffman	GREEN NSC - Greensboro Science Center	jhoffman@greensboroscience.org	336-288-3769x1312
Tracy Fenn	JACKSONVL - Jacksonville Zoo and Gardens, Jacksonville, FL	fennt@jacksonvillezoo.org	
Elizabeth Barnardo	LVZOO - Lehigh Valley Zoo, Schnecksville, PA	ebernardo@lvzoo.org	(610)799-4171
Sandi Shoemaker	MEMPHIS - Memphis Zoological Garden & Aquarium, Memphis, TN	sshoemaker@memphiszoo.org	901-831-5943
Nicole Gould	METROZOO - Zoo Miami, Miami, FL	Nicole.gould@miamidade.gov	
Caitlin Kenney	MYAKKACL - Lemur Conservation Foundation, Myakka City, FL	ckenney@lemurreserve.org	941-322-8494
Christie Eddie	OMAHA - Omaha's Henry Doorly Zoo, Omaha, NE	christiee@omahazoo.com	402-557-6932
Michael Stern	PHILADELP - The Philadelphia Zoo, Philadelphia, PA	stern.michael@phillyzoo.org	215-243-5352
Janine Steele	SACRAMENTO - Sacramento Zoo, Sacramento, CA	jsteele@saczoo.org	916-264-7381
Erin Bussom	SANFORD - Central Florida Zoo, Sanford, FL	erinh@centralfloridazoo.org	
Tracy Sorenson	SANFORD - Central Florida Zoo, Sanford, FL	tracys@centralfloridazoo.org	
Mike Quick	SEDGWICK - Sedgwick County Zoo, Wichita, KS	mquick@scz.org	316-266-8237
Heidi Hellmuth	ST LOUIS - Saint Louis Zoological Park, St. Louis, MO	hellmuth@stlzoo.org	(314)646-4819
Michael Frushour	TOLEDO - Toledo Zoological Gardens, Toledo, OH	Michael.Frushour@toledozoo.org	419-385-5721 ext. 2084
Susan Greathouse	WHEELING - Oglebay Good Zoo, Wheeling, WV	sgreathouse@oglebay.com	(304)243-4157

Mongoose Lemur (Eulemur mongoz) Yellow SSP 2021 Final

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From: [Amanda Mazza](#)
To: [Lamberson, Amanda M](#)
Subject: RE: [EXTERNAL] RE: Incomplete Application - CITES/ESA CS0089413
Date: Tuesday, November 14, 2023 8:45:24 AM
Attachments: [confirmation of arrival of mongoose lemurs.pdf](#)
[specimen report mongoose lemur Emena Cologne Zoo.pdf](#)
[specimen report mongoose lemur Zafy TP Berlin.pdf](#)
[specimen report mongoose lemur Mainty TP Berlin.pdf](#)
[specimen report mongoose lemur Newton Cologne Zoo.pdf](#)
[follow-up questions mongoose lemurs TP Berlin.pdf](#)

Good Morning Amanda,

See attachments provided by Tierpark.
Please let me know if you need anything else.

Thank you,
Amanda Mazza
Registrar/Data Manager
Duke Lemur Center
3705 Erwin Road
Durham, NC 27705
919-401-7272
<http://lemur.duke.edu/>
Pronouns: she/her/hers

From: Lamberson, Amanda M <amanda_lamberson@fws.gov>
Sent: Thursday, November 9, 2023 4:07 PM
To: Amanda Mazza <amanda.mazza@duke.edu>
Subject: Re: [EXTERNAL] RE: Incomplete Application - CITES/ESA CS0089413

Good afternoon Amanda,

We have considered the letter from Tierpark Berlin further and have two questions.

The letter explaining their capacity states that two lemurs will leave for Cologne Zoo on November 2, 2023. Can you confirm with them if these lemurs did indeed leave and confirm the current number and sex ratio of lemurs at the facility?

The letter also states that the second pair intended for export will be moved to another EAZA facility "in the future" after the six week quarantine period. Is there a more specific timeline on when this pair will be moved?

I appreciate your time.

Kind regards,

Amanda Lamberson
Biologist
U.S. Fish and Wildlife Service
Division of Management Authority
Branch of Permits, MS: IA
5275 Leesburg Pike
Falls Church, VA 22041

From: Amanda Mazza <amanda.mazza@duke.edu>
Sent: Wednesday, November 1, 2023 8:37 AM
To: Lamberson, Amanda M <amanda_lamberson@fws.gov>
Subject: RE: [EXTERNAL] RE: Incomplete Application - CITES/ESA CS0089413

Hi Amanda,

Attached is a letter from Tierpark Berlin on how they will manage their capacity.
Please let me know if you need any further information.

Amanda Mazza
Registrar/Data Manager
Duke Lemur Center
3705 Erwin Road
Durham, NC 27705
919-401-7272
<http://lemur.duke.edu/>
Pronouns: she/her/hers

From: Lamberson, Amanda M <amanda_lamberson@fws.gov>
Sent: Friday, October 27, 2023 1:17 PM
To: Amanda Mazza <amanda.mazza@duke.edu>
Subject: Re: [EXTERNAL] RE: Incomplete Application - CITES/ESA CS0089413

Hi Amanda,

Thank you for the transfer records.

Regarding the statement from Tierpark Berlin, this information is contradictory to the information provided in the application and the purpose of the export of the four mongoose lemurs. The information provided in response to Question 21 specified they have the capacity to care for a total of 8 mongoose lemurs, with this import of the four lemurs putting them at that capacity. Under the ESA, the Service will consider the export of Endangered listed wildlife for scientific purposes, for enhancing the propagation or survival, or for the incidental taking

Kölner Zoo
Riehler Straße 173
50735 Köln
Germany

Dr. Johanna Rode-White
Curator for Primates and Hoofstock



Date: 14th of November 2023

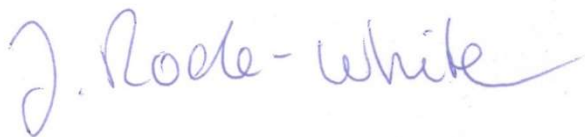
Re: Mongoose lemurs

Dear sir or madam,

This letter is to confirm that Cologne Zoo (Kölner Zoo) has received two mongoose lemurs (*Eulemur mongoz*), the female with the GAN number NVZ18-03993, and the male with the GAN number MIG12-28969301, on 2nd of November 2023. The transfer of these two individuals from Tierpark Berlin was recommended by the EEP.

Faithfully,

Dr. Johanna Rode-White





Zoologischer Garten Berlin | Hardenbergplatz 8 | 10787 Berlin

U.S. Fish and Wildlife Service

Zoologischer Garten Berlin AG

Hardenbergplatz 8

10787 Berlin

info@zoo-berlin.de

www.zoo-berlin.de

www.aquarium-berlin.de

www.tierpark-berlin.de

Unser Zeichen
py/py

Telefonnummer
+49 17620535006

E-Mail
a.pauly@zoo-berlin.de

Datum
14.11.2023

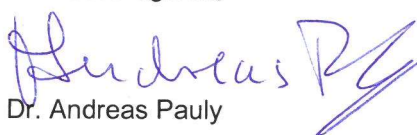
Follow-up questions mongoose lemurs

To whom it may concern,

I would like to answer the follow-up questions concerning the mongoose lemurs.

- 1.1 mongoose lemurs ("Newton" and "Emena") were transferred to Cologne Zoo on 2nd of November 2023 (see attached letter from Cologne Zoo and specimen reports from ZIMS)
- Currently only one pair of mongoose lemurs ("Mainty" and "Zafy") is kept at Tierpark Berlin (see specimen reports from ZIMS).
- On recommendation of the EEP coordinator one pair, which should be imported from the Duke Lemur Center (USA, North Carolina), should go to NaturZoo Rheine (Germany) shortly after finishing the quarantine at Tierpark Berlin.

With best regards,


Dr. Andreas Pauly

Head of Wildlife Health, Animal Welfare and Research
Veterinary specialist for zoo animals
Curator of primates (Tierpark Berlin)
EEP coordinator Coquerel's sifaka (*Propithecus coquereli*)
Veterinary advisor Prosimian TAG (EAZA)

ZOOLOGISCHER GARTEN BERLIN AG

Vorsitzender des Aufsichtsrates
Frank Bruckmann
Vorstand
Dr. Andreas Knieriem

HR AG Charlottenburg HRB 4306 B
Steuernummer: 27/612/00636
VAT ID: DE 136782336

Commerzbank AG
IBAN: DE57100400000661234501
BIC: COBADEFFXXX

Berliner Volksbank eG
IBAN: DE28100900008848114007
BIC: BEVODE33XXX



Re: [EXTERNAL] RE: Incomplete Application - CITES/ESA CS0089413

Lamberson, Amanda M <amanda_lamberson@fws.gov>

Tue 11/28/2023 2:38 PM

To: Amanda Mazza <amanda.mazza@duke.edu>

Hi Amanda,

Thanks for this information. I understand from the letter that one pair of the lemurs will be moved from Tierpark Berlin "shortly" after the quarantine is complete and moved to NaturZoo Rheine. Previously you had provided information that Tierpark Berlin intended to retain both pairs for breeding for some time before transferring one of the pairs. To confirm, it seems based on Tierpark Berlin's letter they are not being recommended by the EEP to breed both pairs. Is this correct? Second, which pair is being recommended for transfer? If unknown, why?

Kind regards,

Amanda Lamberson
Biologist
U.S. Fish and Wildlife Service
Division of Management Authority
Branch of Permits, MS: IA
5275 Leesburg Pike
Falls Church, VA 22041

In accordance with 50 CFR 13.11(e), if the requested information is not received by this office within 45 calendar days of the date of this email, your application will be abandoned and administratively closed. Once a file is closed, you will need to submit a new application, and all required fees, for the Service to consider your proposed activity.

From: Amanda Mazza <amanda.mazza@duke.edu>
Sent: Tuesday, November 14, 2023 8:43 AM
To: Lamberson, Amanda M <amanda_lamberson@fws.gov>
Subject: RE: [EXTERNAL] RE: Incomplete Application - CITES/ESA CS0089413

Good Morning Amanda,

See attachments provided by Tierpark.
Please let me know if you need anything else.

Thank you,
Amanda Mazza
Registrar/Data Manager
Duke Lemur Center
3705 Erwin Road
Durham, NC 27705
919-401-7272
<http://lemur.duke.edu/>
Pronouns: she/her/hers

From: Amanda Mazza <amanda.mazza@duke.edu>
Sent: Thursday, January 25, 2024 11:36 AM
To: Lamberson, Amanda M <amanda_lamberson@fws.gov>
Subject: RE: [EXTERNAL] RE: Incomplete Application - CITES/ESA CS0089413

Hi Amanda,

I trust that you had a good holiday season and that like us, are back into the full swing of your work.

I have spent some time discussing the matter of this lemur transfer from the Duke Lemur Center to the Tierpark Berlin Zoo with Tierpark's Curator. I have also had some email correspondence with Ms. Emily Mesler, where she outlined that CITES export permitted animals moving from the USA were expected to stay at the receiving permitted institution for a minimum of one year. With this in mind, Tierpark Berlin Zoo has decided to do an internal transfer of one pair of their current mongoose lemur residents to the NaturZoo Rheine. This in turn will provide permanent space at the Tierpark Berlin Zoo to hold and breed both pairs of incoming lemurs from the Duke Lemur Center indefinitely. This effectively takes NaturZoo Rheine out of this permit altogether. Please refer to the new CITES import permit for Tierpark Berlin Zoo (attached) from Germany.

Thank you,
Amanda Mazza
Registrar/Data Manager
Duke Lemur Center
3705 Erwin Road
Durham, NC 27705
919-401-7272
<http://lemur.duke.edu/>
Pronouns: she/her/hers

From: Lamberson, Amanda M <amanda_lamberson@fws.gov>
Sent: Tuesday, November 28, 2023 2:38 PM
To: Amanda Mazza <amanda.mazza@duke.edu>
Subject: Re: [EXTERNAL] RE: Incomplete Application - CITES/ESA CS0089413

Hi Amanda,

Thanks for this information. I understand from the letter that one pair of the lemurs will be moved from Tierpark Berlin "shortly" after the quarantine is complete and moved to NaturZoo Rheine. Previously you had provided information that Tierpark Berlin intended to retain both pairs for breeding for some time before transferring one of the pairs. To confirm, it seems based on Tierpark Berlin's letter they are not being recommended by the EEP to breed both pairs. Is this correct? Second, which pair is being recommended for transfer? If unknown, why?

Kind regards,

Amanda Lamberson
Biologist
U.S. Fish and Wildlife Service
Division of Management Authority
Branch of Permits, MS: IA
5275 Leesburg Pike
Falls Church, VA 22041

In accordance with 50 CFR 13.11(e), if the requested information is not received by this office within 45 calendar days of the date of this email, your application will be abandoned and administratively closed. Once a file is closed, you will need to submit a new application, and all required fees, for the Service to consider your proposed activity.

From: Amanda Mazza <amanda.mazza@duke.edu>