



# Duke Lemur Center

RCVD JAN 30 2019

David Haring, Registrar  
3705 Erwin Road  
Durham, NC 27705-5000

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December 21, 2018

Fish and Wildlife Service  
Division of Management Authority  
Branch of Permits, MS:IA  
5275 Leesburg Pike  
Falls Church, VA 22041 3803

To Whom It May Concern:

Enclosed please find a completed application form (3-200-37) from the Duke Lemur Center requesting issuance of a CITES I permit to export one pair of Coquerel's sifaka (*Propithecus coquereli*) to the Koelner Zoo (Cologne Zoo) in Koln (Cologne) Germany.

This is the final of four CITES 1 permit applications from the Lemur Center requesting permits to send four pairs of Coquerel's sifaka to four different institutions in Europe. The first (containing applications to send a pair of sifaka each to Bristol Zoo and Chester Zoo in the UK) was submitted 10/12/18, the next (third) application was submitted 12/12/18 to send a pair of sifaka to Tierpark Zoo, Berlin.

These transfers are endorsed by the sifaka SSP coordinator and the chair of the Prosimian TAG.

Please contact me if additional information is required or if there are any questions with the application.

Sincerely:

David Haring  
Registrar Duke Lemur Center  
919-401-7228  
dharing@duke.edu



Department of Interior  
U.S. Fish and Wildlife Service  
**Federal Fish and Wildlife Permit Application Form**

Type of Activity

U.S. Fish and Wildlife Service  
Division of Management Authority  
Branch of Permits, MS: IA  
5275 Leesburg Pike  
Falls Church, VA 22041-3803  
1-800-358-2104 or 703-358-2104

**EXPORT/RE-EXPORT/IMPORT/INTERSTATE AND FOREIGN  
COMMERCE/TAKE OF ANIMALS (LIVE/ SAMPLES/PARTS/PRODUCTS)  
under the Convention on International Trade in Endangered Species  
(CITES) and/or the U.S. Endangered Species Act (ESA)**

Complete Sections A or B, and C, D, and E of this application. U.S. address may be required in Section C, see instructions for details. **Instructions on how to make your application complete and help avoid unnecessary delays are attached.**

**Section A: Complete if applying as an individual**

1.a. Last Name	1.b. First Name	1.c. Middle Name/Initial	1.d. Suffix
2. Date of Birth (mm/dd/yyyy)	3. Telephone Number	3.a. Alternate Telephone Number	4. E-mail address


**Section B: Complete if applying on behalf of a business, corporation, public agency, Tribe, or institution**

1.a. Name of business, agency, Tribe, or institution <b>Duke University Lemur Center</b>		1.b. Doing business as (DBA) <b>Duke University</b>	
2. Tax identification no. <b>560-532-129</b>		3. Description of business, agency, Tribe, or institution <b>Conservation institution specializing in prosimian research</b>	
4.a. Principal officer Last name <b>Dye</b>	4.b. Principal officer First Name <b>Greg</b>	4.c. Principal officer Middle name/initial	4.d. Suffix <b>Mr.</b>
5. Principal officer title <b>Interim Director/Director of Operations</b>		6. Primary contact name <b>David Haring (dharing@duke.edu)</b>	
7.a. Business telephone number <b>919-401-7228</b>	7.b. Alternate telephone number	7.c. Business fax number <b>919-490-5394</b>	7.d. Business e-mail address <b>dharing@duke.edu</b>

**Section C: All applicants complete address information**

1.a. Physical address (Street address; Apartment #, Suite #, or Room #; no P.O. Boxes) <b>3705 Erwin Rd</b>				
1.b. City <b>Durham</b>	1.c. State <b>NC</b>	1.d. Zip code/Postal code <b>27705</b>	1.e. County/Province <b>Durham</b>	1.f. Country <b>United States</b>
2.a. Mailing address (include if different than physical address; include name of contact person if applicable)				
2.b. City	2.c. State	2.d. Zip code/Postal code	2.e. County/Province	2.f. Country

**Section D: All applicants MUST complete**

1. Attach the <b>nonrefundable application processing fee</b> in the form of a check or money order payable to the U.S. FISH AND WILDLIFE SERVICE in the amount of \$100. Federal, Tribal, State, and local government agencies, and those acting on behalf of such agencies, are exempt from the processing fee – attach documentation of fee exempt status as outlined in Instructions [50 CFR 13.11(d)].
2. Certification: I hereby certify that I have read and am familiar with the regulations contained in <b>Title 50 Part 13 of the Code of Federal Regulations</b> and the other <b>applicable parts in subchapter B of Chapter I of Title 50</b> , and I certify that the information submitted in this application for a permit is complete and accurate to the best of my knowledge and belief. I understand that any false statement herein may subject me to the criminal penalties of 18 U.S.C. 1001.
Signature of applicant/Principal Officer for permit (No photocopied or stamped signatures) Date of signature (mm/dd/yyyy)   <b>12/18/2018</b>

Please continue to next page



**DUKE LEMUR CENTER EXPORT APPLICATION**  
**(1.1 Coquerel's sifaka, *Propithecus coquereli* to Cologne Zoo)**

**1. Name and address where you wish the permit to be mailed, if different from page 1. If you wish the permit to be sent to you by means other than regular mail, provide an air bill, pre-paid envelope, or billing information:**

Please mail to address on Page 1.

A pre-addressed Federal Express airway bill with billing reference is enclosed.

**2. Who should we contact if we have questions about the application?  
(Include name, phone number, and email):**

Mr. David Haring, Registrar  
Duke Lemur Center  
3705 Erwin Road  
Durham, North Carolina 27705  
[dharing@duke.edu](mailto:dharing@duke.edu)  
919-401-7228

**3. Have you or any other 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 any charges for any violations of the laws mentioned above?**

NO

**4. What activity are you requesting authorization to carry out:**

EXPORT

Two captive born coquerel's sifaka (*Propithecus coquereli*) are being exported by:

Duke Lemur Center  
3705 Erwin Rd.  
Durham, NC 27705  
Ph: 919-401-7228  
Fax: 919-490-5394

**5. For EACH animal involved in the proposed activity provide:**

This application is for the exportation of two (1.1) captive born Coquerel's sifaka.

Scientific name	Common name	Birth date	Wild or captive-born	Quantity	Gender	Permanent markings	Other info
<i>Propithecus coquereli</i>	Coquerel's sifaka	10/24/16	Captive born	1	Male	Transponder 00-07A1-003E	DLC # 7259 Studbook # 305, "Sigismund"
<i>Propithecus coquereli</i>	Coquerel's sifaka	01/16/12	Captive born	1	Female	Transponder # 00-06CA-602A	DLC #7083, Studbook #264, "Martine"

Copies of the animals' ISIS specimen reports are attached.

*Please see Attachment 1: Specimen Reports*

**6. The current location of the specimen(s) (address and country):**

Duke Lemur Center  
3705 Erwin Rd.  
Durham, North Carolina 27705  
USA

**7. Recipient/Sender:**

The Coquerel's sifakas will be exported to the Cologne Zoo (Koelner Zoo)

Koelner Zoo  
Riehler Str. 173  
50735 Köln/Cologne  
Germany



## SOURCE OF SPECIMEN

**8. For captive-bred animals or animal(s) from which the specimen(s) are/were obtained, provide a signed and dated statement from the breeder that includes the following:**

- a. Scientific name(genus, species, and, if applicable, subspecies) and common name;
- b. Name and address of the facility where the animals was bred and born;
- c. Birth/hatch date (mm/dd/yyyy), and, if applicable, identification information;
- d. Location (name of facility, address, city, State, postal code) of parental stock;
- e. A statement that the animal was bred at the above facility;
- f. Documentation demonstrating the history of transactions (e.g., chain of custody or ownership of the animal).
- g.

*Please see Attachment 2: Signed statement from DLC Interim Director, Greg Dye.*

**9. For EACH animal/specimen taken from the wild, provide the following:**

N/A

## JUSTIFICATION FOR REQUESTED ACTIVITY

**10. Provide a full statement justifying the proposed activity, particularly the following:**

- a. Describe the purpose of your proposed activity.

The exportation of the two animals requested under this proposal are part of a global initiative for enhancing captive propagation of Coquerel's sifakas (*Propithecus coquereli*), an endangered lemur native to Madagascar. This species is classified as endangered and at risk of extinction in the wild due to rapid deforestation and habitat destruction. Outside of Madagascar, only 66 individuals of the species are in captive settings in 13 Association of Zoos and Aquariums (AZA) member institutions in the United States. All of these animals are currently owned by the Duke University Lemur Center (DLC) and are managed by the Species Survival Program (SSP) under the umbrella of the AZA.

In an effort to improve the captive propagation of Coquerel's sifakas, a new global initiative was undertaken in 2015. Discussions between the DLC and the European Association of Zoos and Aquaria (EAZA) resulted in an agreement to transfer 8 animals to 4 institutions in Europe. As space is the primary limiting factor for establishing a long term sustainable population of this species in captivity, establishing a breeding population in Europe allows expansion of the breeding program and the creation of a global population as a hedge against extinction in the wild. In addition, expanding the breeding population to countries outside of North America creates new partners and brings much needed expertise and scientific insight of these animals'



dietary, social, medical, and reproductive needs for better supporting both ex-situ and in-situ populations.

Four European zoological institutions, including the Cologne Zoo, have a strong interest in housing and working with this species. Each zoo is scheduled to receive a breeding pair of Coquerel's sifakas. The DLC will remain in close contact with the Curatorial and Veterinary staffs of the institutions to field questions and offer recommendations, guidance, and veterinary advice as needed to maximize the health, well-being, and reproductive success of animals exported to Europe as part of this global initiative. The DLC also has proven husbandry, veterinary and housing protocols that are provided to involved institutions in advance. In addition to providing this information, a thorough application and review process including site visits to each institution is undertaken by the SSP Coordinator, Britt Keith, the DLC Curator, Cathy Williams, DVM, or the DLC's Interim Director, Greg Dye, to gain a thorough understanding of each institutions ability to house and breed sifaka successfully. The Cologne Zoo inspection occurred May 21<sup>th</sup> 2018 by SSP Coordinator, Britt Keith.

All offspring born to sifakas transferred to European zoos as part of this initiative will remain the property of the Duke Lemur Center and the global population will be managed as a single entity by the Species Survival Program (SSP) under the umbrella of the AZA to maintain optimal genetic diversity. The SSP and the AZA will work closely with the European Association of Zoos and Aquariums (EAZA) to ensure that all descendants of this project remain in EAZA or AZA accredited facilities as part of the global breeding program for the species. Under no circumstances will animals be sold or transferred to non-accredited facilities.

#### Background on the Duke Lemur Center

The DLC, located in Durham, North Carolina, is the largest facility in the world dedicated to the conservation and study of prosimian primates. The Center was founded in 1966 and during its 50 plus years in existence it has housed, propagated, and studied nearly 4000 animals of 31 species of lemurs, lorises and tarsiers (together referred to as prosimian primates). Today, it houses close to 225 individuals of 17 species, all of which are lemurs native to Madagascar with the exception of two species of loris. The scientific endeavors at the DLC span a remarkable array of disciplines, from behavior and genomics to physiology and paleontology. Conservation biology is a major focus and provides the conceptual and operational bridge between the living collections of the DLC and its outreach and conservation activities in Madagascar.

#### Coquerel's sifaka (*Propithecus coquereli*) at the DLC - background

The Duke Lemur Center has housed Coquerel's sifaka since 1968 when a male and 3 female *Propithecus coquereli* (then designated *Propithecus verreauxi coquereli*) were imported from Madagascar. While these original founders produced nine infants, by 1977 only one captive born animal remained from the original group of wild caught and captive born animals. Importation of an additional eleven Coquerel's sifakas, five males and six females, from Madagascar was undertaken in the early 1980's. The improvement of husbandry methods over the next ten years resulted in significant improvements in life span, health, reproductive success, and infant survival since the mid-1980s. These changes included adding fresh, locally available browse to



the diet to provide more fiber and natural forage consistent with their diets in the wild, providing outdoor housing and opportunities to free range in natural forested enclosures surrounding the DLC in suitable weather, specialized veterinary care, and improved infant management protocols. Since 1985, there have been 185 Coquerel's sifakas born at the Duke Lemur Center and in U.S zoological institutions which have this species on loan from the Lemur Center. Of those 185 births, 125 infants survived to at least six months of age, a much higher infant survival rate than the species has in the wild in Madagascar.

For a more detailed description of the Duke Lemur Center facilities and programs as well as how DLC activities in the United States and in Madagascar directly and positively impact the in-situ and ex-situ conservation of Coquerel's sifakas (*Propithecus coquereli*) and related sifaka species (*Propithecus sp.*) see:

*Please see Attachment 3: The Duke Lemur Center: Description of Facilities, Programs and Conservation Initiatives.*

- b. Description of the technical expertise of each person (please also include CV or resume), as it relates to the proposed activities. If the proposed activity involves live animals, include the experience of each animal caretaker working with the species.

*Please see attachment 4: CV's of the following members of staff at the Cologne Zoo*

Veterinarian Dr. Sandra Langer (now Sandra Marcordes)

Curator Bernd Marcordes.

CVs for Cologne animal staff are not available but the keepers Astrid Corbani, Tobias Kuchler, Marietta Orzlowski, Steffi Kessel and Steffi Vieth, who will work with the sifakas have knowledge and longtime experience in keeping and breeding lemurs. All keepers have passed a German Zookeeper examination and are specialized to work with different kind of primates they are responsible for.

The department that houses lemurs consists of 6 fulltime zookeepers and their lead keeper. The Curator is very involved in the daily routine of this department and all of them are very enthusiastic at the prospect of adding sifaka to their collection. Each keeper cares for a portion of the animals, including lemurs and monkeys and other mammals, and they rotate through weekends and holidays, much like many American institutions.



- c. Copies of contracts, agreements, or other documents that identify persons involved and dates of activities for which authorization is being requested.

*Please see attachment 5: Letter of Support from the SSP Coordinator, Ms. Britt Keith, Duke Lemur Center and Ms. Christie Eddie, Chair Prosimian Taxon Advisory Group. A copy of the loan agreement between the Duke Lemur Center, and the Cologne Zoo is also attached.*

**11. A statement on how the activities will enhance or benefit the wild population (e.g., in-situ and ex-situ projects).**

The genetic and demographic benefits of ensuring a healthy ex-situ population of Coquerel's sifakas to preventing extinction of this endangered primate have been described above. Without a viable and sustainable population in captive settings, the possibility of one day reintroducing Coquerel's sifakas to the wild is lost forever. 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 sifakas at Tierpark Berlin Zoo (and other zoos that are part of this global initiative) provides critically important conservation education messaging for visitors. Such messaging supports not only sifaka 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.

**Cologne Zoo- Conservation Work in Madagascar**

The Cologne Zoo is a long term board member of the Madagascar Fauna and Flora Group (MFG). The MFG is a coalition of Zoos that conduct conservation projects in Madagascar, including regions in which Coquerel's sifakas live. The MFG has in-situ and ex-situ projects aimed at protecting lemur habit in Madagascar. Among these are providing support for Malagasy guides that patrol protected forests to prevent poaching and illegal logging in national parks, providing environmental education to children living in villages surrounding critical lemur habitat, and facilitating research that provides critical information necessary for government officials to make informed policy decisions regarding protection of the remaining forests.

**12. If live specimens are to be held in captivity as part of the proposed activity:**

**a. Provide a detailed description and photos or diagrams clearly depicting the existing facilities where the wildlife will be maintained;**

The Cologne Zoo is a 19 hectare facility housing over 7,000 animals. The facility focuses on large animal enclosures and has a large number of annual visitors. The city of Cologne provides ample funding to the zoo. In addition, the zoo in has ample generous private donors.

The Cologne Zoo has a long history of housing prosimians and other difficult to maintain leaf-eating primates including 3 species of langurs (*Pygathrix spp.*). The current housing for their



primates on and off of display is large and well-furnished and provides multiple choices for perching and many areas for animals to have privacy.

The indoor holding areas will be divided into 3 or 4 large rooms, all with visual access and shift doors connecting each room. There is ample space for a family of 5 -6 animals in this large space. The space proposed for housing sifaka will be in the former elephant house, which has been vacated since the elephants were moved to a different part of the zoo. Exhibits are being renovated specifically to meet the needs of the sifaka. Diagrams and descriptions of the housing are provided below:

Indoor housing and visitor viewing:



The areas in the diagram above that will house sifakas are at the top of the drawing and are light grey, dark grey, and yellow in color. Having three indoor areas for the sifakas allows animals to be temporarily separated as needed to manage females and infants immediately after birth or in case of tension within the group. The dimensions of each area are:

Area 1	12.3 m <sup>2</sup> (light grey)
Area 2	22.1 m <sup>2</sup> (grey-blue)
Area 3	28.2 m <sup>2</sup> (yellow)

The height of all enclosures is ~ 5 m

The schematic below is of the interior of the indoor animal housing area and visitor viewing areas:

View 1 is the side view with the animal enclosure on the right side and visitor areas in the middle.

View 2 is the long view from the visitor viewing area looking at the indoor animal housing area.



The inside enclosure measures 80m<sup>2</sup> total and is between 5.2 to 6m high. The enclosures have wire mesh on the visitor viewing side. Indoor enclosures are heated and temperatures will not drop below 25C° (77° F). Lighting is via artificial UV-lights. In good weather animals will have access to the outside enclosure through three small doors that connect the indoor enclosures to the outside enclosure. These animal doors are above the zookeeper area at ~ 2.2 m above ground level. The openings have dimensions of ~ 40 cm x 40 cm. Animals are allowed outdoor access all day when temperatures are above 50 °F. If it drops below 40 °F, animals are brought inside



without access to the outdoor yards. At temperatures between 40°F and 50°F animals have indoor and outdoor access and can choose where they want to be. The temperatures listed are in line with guidelines for the DLC animals.

As noted above, there are three sections indoors so that animals can be separated if necessary. The three indoor housing areas are separated internally by double netting to prevent animals from reaching through and injuring conspecifics. The interior is furnished with numerous medium to large diameter vertical and horizontal branches in each of the three sections. There is a keeper area behind the enclosures with a door accessing each area as well as separate training doors.

Outdoor enclosures:

Perspective 1. Outdoor netted enclosure.



Perspective 2. Outdoor netted enclosure.



The netting for the outdoor enclosure will be galvanized mesh the first meter from the ground and the rest will be covered by nylon netting. This type of enclosure is successfully used for a similar species of sifaka, the crowned sifaka (*Propithecus coronatus*) which are housed in several European Zoos, so will work well for the Coquerel's sifakas. The outside enclosure will be divided into two halves. The ground will be covered with grass or other natural substrates. The interior of the outdoor yard will be furnished with a combination of large living trees, dead trees, branches, ropes, and artificial wooden structures to accommodate natural locomotion and resting.

The outside enclosure measures ~ 26 m long across the back (along the house wall). The distance to the front part of the exhibit including the visitor viewing area is ~ 20m long. The approximate size in square meters is 520 m<sup>2</sup>. The interior of the enclosure will be planted with larger living trees in addition to dead trees, ropes, branches, and an artificial solid wood structure. In combination, the structures are designed to encourage natural species typical locomotion as well as leaping, and provide space for resting.

Visitors will not be able to approach the netting directly as the enclosure will have a massive planting around the edges (not present in current photos). In selected areas where glass separates visitors from the animals, visitors will be able view the interior of the enclosure and animals from a closer perspective.

Completion times are estimated to be the end of February for the indoor enclosures and the end of May for the outdoor enclosures.

- b. statement of the specific technical experience of CV or resume available to the recipient(s) for maintaining and propagating live specimens of the same or similar species;**

*Please refer to information and attachments provided for question 10.b.*



**c. The number of years each species has been maintained at the facility, and the number of births and deaths of each species for the last five years**

**Table 1:** Species of lemurs and similar leaf eating primates held at Cologne Zoo, years maintained, and births and deaths during the past five years.

Species	Years maintained	Number of successful births for the last five years	List of mortalities in the last five years
Blue-eyed lemur ( <i>Eulemur flavifrons</i> )	25	0	0
Greater bamboo lemur ( <i>Prolemur simus</i> )	19	5	1
Red-ruffed lemur ( <i>Varecia rubra</i> )	32	3	1
White-belted ruffed lemur ( <i>Varecia variegata subcineta</i> )	29	18	2
Langurs ( <i>Pygathrix spp.</i> )	29	1	2
Black and white colobus ( <i>Colobus sp.</i> )	28	3	2

**d. Causes of Mortalities at Cologne Zoo for *Propithecus coquereli* or similar species for past five years and steps taken to avoid or decrease mortalities:**

The Cologne Zoo has not previously held Coquerel's sifakas but they have housed four different lemurs species for up to 32 years with good success both breeding and keeping animals alive and healthy. In addition, the Cologne Zoo has a long history of successfully housing langurs and colobus monkeys, two primate species that have very specialized husbandry and dietary needs similar to sifakas.

Unfortunately, the Cologne Zoo was not able to provide us with comprehensive information on the numbers of mortalities in these species over the past five years as their former veterinarian did not leave much documentation behind when he left. The Zoo hired a new veterinarian, Dr. Sandra Marcordes, in November of 2016 and she immediately implemented new record keeping procedures. All medical data including births, deaths, post-mortem findings and causes of mortality is now entered daily into the Zoological Information Management System (ZIMS). ZIMS is a global zoological data management system that allows institutions to share data with other zoos including loaning institutions. Thus, the DLC will have real time access to the Coquerel's sifaka's medical and husbandry records after animals are transferred.



The Cologne Zoo was able to provide post-mortem reports for four ruffed lemurs that died between 2013 and 2015. Two of the four lemurs that died were neonates and died within 2 days of birth either as a result of failure to thrive or maternal neglect. The remaining two animals were adults. One died of a severe viral intestinal infection (Coronavirus enteritis) and the second, a 30 year old animal, died of a severe bacterial infection secondary to bite wounds received from a conspecific.

The zoo has taken several steps to ensure the health of its primate collection since Dr. Marcordes' arrival. These include:

1. Entering all medical records into ZIMS – as noted above
2. Implementing strict controls over diet and food handling procedures
3. Instituting a Disease Surveillance Program which includes
  - a. Daily animal observations by husbandry staff familiar with the animals,
  - b. Fecal exams for parasites every 3- 6 months and parasite treatment as needed,
  - c. Regular tuberculosis testing for primates,
  - d. Quarantining sick animals, and
  - e. Doing complete post-mortem exams on deceased animals.

#### IMPORTS, EXPORTS, OR RE-EXPORTS

**13. For shipment of live specimens, the transport conditions must comply with the CITES Guidelines for Transport of Live Animals or, in the case of air transport, with the International Air Transport Association (IATA) live animal regulations (contact airline for information). As such, describe:**

**a. The type, size, and construction of any shipping container; and**

The pair of *Propithecus coquereli* will be shipped individually, in large rigid plastic pet kennel carriers (28" X 20.5" X 21.5") with metal doors and metal 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 will allow for the animals to be fed en route in the event of flight delay.

**14. For import of southern white rhinoceroses from South Africa and Swaziland...**

N/A

**15. For import of LIVE CITES Appendix-I marine mammal specimens, provide a copy of your FWS or NOAA Fisheries permit or authorization.**

N/A

**16. For import of CITES Appendix I listed species provide information to show the import is not for primarily commercial purposes as outlined in Resolution Conf. 5.10 ([www.cites.org](http://www.cites.org)).**

The exported specimens will be utilized for captive breeding in a European Association of Zoos and Aquaria (EAZA) managed population and for legitimate, noninvasive scientific studies. Offspring of the exported pair of *Propithecus coquereli* may, in accordance with breeding recommendations by the North American Coquerel's sifaka Species Survival Program (SSP), be shipped to EAZA member zoological institutions for additional captive breeding for the improvement of captive genetics of this species. Individual animals may be loaned or donated to EAZA institutions for these purposes, but neither the animals, nor their offspring will ever be sold under any circumstances.

**17. For export of Appendix I listed species provide a copy of the CITES import permit, or evidence one will be issued by the Management Authority of the country to which you plan to export the specimen(s). In accordance with Article III of the CITES treaty, it is required that import permits are issued before the corresponding export permit.**

The Cologne Zoo is in the process of securing a CITES I import permit. DLC will furnish it to USFWS/DMA as soon as it is issued.

**18. If the specimen is being re-exported (exporting a specimen that was previously imported into the United States) provide:**

N/A

**19. All international shipment(s) must be through a designated port. A list of designated ports (where an inspector is posted) is available from <http://www.fws.gov/le/designated-ports.html>. 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).**

The two Coquerel's sifaka will be exported through the port of New York or Atlanta, or another designated port of entry.



## Specimen Report



Species360 NKG12-00185

Local ID: DUKE PRIM / 7083

GAN

Propithecus coquereli

Coquerel's sifaka

Studbooks WAZA

Order Primates

Family Indridae

IUCN Endangered (EN)

CITES I

Start Date Jan 01, 1800

End Date Dec 20, 2018

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## Basic Animal Information

## No Local Data Differences Found

<b>Sex - Contraception</b>	Female - Medical method-hormonal/Active [ST LOUIS]	<b>Status</b>	Alive
<b>Birthdate - Age</b>	Jan 16, 2012 - 6Y, 11M, 4D	<b>Preferred ID</b>	DUKE PRIM / 7083
<b>Origin</b>	Saint Louis Zoological Park	<b>Rearing</b>	Parent
<b>Birth Type</b>	Captive Birth/Hatch	<b>Hybrid Status</b>	Not Hybrid
<b>Sire</b>	6161797 (DUKE PRIM / 6741)	<b>Dam</b>	26383490 (DUKE PRIM / 6803)
<b>Current Collection</b>	Main Institution Animal Collection	<b>Collection Trip</b>	
<b>Clutch / Litter</b>		<b>Enclosure</b>	F1.3.

## Visit History

Date in	Acquisition - Vendor/Local ID	Phy	Own	Reported By	Disposition - Recipient/Local ID	Phy	Own	Date Out
Jan 16, 2012	Birth/Hatch	-	In	DUKE PRIM / 7083		-	-	
Jan 16, 2012	Birth/Hatch Owner: DUKE PRIM/7083	In	-	ST LOUIS / 109438	Loan Return To Owner DUKE PRIM/7083	Out	-	Oct 18, 2018
Oct 18, 2018	Loan Return to Us Sender: ST LOUIS/109438	In	-	DUKE PRIM / 7083		-	-	

## Identifiers

Reported By	Effective Date	Type	Identifier	Location	Status	Comments
DUKE PRIM	Oct 18, 2018	Transponder	00-06CA-602A		In-Use	
ST LOUIS	Apr 08, 2012	House Name	Martine		Active	
DUKE PRIM	Feb 12, 2012	House Name	Martine		Active	
DUKE PRIM	Feb 12, 2012	Intl Stdbk#	264		Active	
ST LOUIS	Jan 16, 2012	Local ID	109438		Active	
ST LOUIS	Jan 16, 2012	Intl Stdbk#	264		Active	
DUKE PRIM	Jan 16, 2012	Local ID	7083		Active	
ST LOUIS	Jul 25, 2012	Transponder	00-06CA-602A	Interscapular	In-Use	Trovan micro-chip

## Sex Information

Reported By	Date	Sex	Comments
ST LOUIS	Jan 16, 2012	Female	
DUKE PRIM	Jan 16, 2012	Female	



## Specimen Report

Species360 FWM16-10301

Local ID: DUKE PRIM / 7259

## GAN

Propithecus coquereli

Coquerel's sifaka

Studbooks WAZA

Order Primates

Family

Indridae

IUCN Endangered (EN)

CITES I

Start Date Jan 01, 1800

End Date Dec 20, 2018

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## Basic Animal Information

**Sex - Contraception** Male -  
**Birthdate - Age** Oct 24, 2016 - 2Y,1M,26D  
**Origin** Maryland Zoo in Baltimore  
**Birth Type** Captive Birth/Hatch  
**Sire** 26465267 (BALTIMORE / 5962)  
**Current Collection** Main Institution Animal Collection  
**Clutch / Litter**

**Status** Alive  
**Preferred ID** DUKE PRIM / 7259  
**Rearing**  
**Hybrid Status** Not Hybrid  
**Dam** 26465270 (BALTIMORE / 5963)  
**Collection Trip**  
**Enclosure** F1.3.

## Local Data Differences

**Sire** 26465267 (DUKE PRIM / 6797)  
**Dam** 26465270 (DUKE PRIM / 6828)

## Visit History

Date in	Acquisition - Vendor/Local ID	Phy	Own	Reported By	Disposition - Recipient/Local ID	Phy	Own	Date Out
Sep 07, 2016	Fetus Identified	In	-	BALTIMORE / 7992		-	-	
Oct 24, 2016	Birth/Hatch	-	In	DUKE PRIM / 7259		-	-	
Oct 24, 2016	Birth Event	-	-	BALTIMORE / 7992	Loan Return To Owner DUKE PRIM/7259	Out	-	Oct 16, 2018
Oct 16, 2018	Loan Return to Us Sender: BALTIMORE/7992	In	-	DUKE PRIM / 7259		-	-	

## Identifiers

Reported By	Effective Date	Type	Identifier	Location	Status	Comments
DUKE PRIM	Oct 18, 2018	Transponder	00-07A1-003E	Interscapular	In-Use	
SPECIE360	Oct 16, 2018	Old Accession Number	ISS18-00624		Active	
BALTIMORE	Feb 21, 2018	House Name	Ziggy		Active	
DUKE PRIM	Jan 22, 2018	Intl Stdbk#	305		Active	
SPECIE360	Jul 07, 2017	Old Accession Number	FWM16-10257		Active	
DUKE PRIM	Jan 17, 2017	House Name	Sigismund		Active	
DUKE PRIM	Oct 24, 2016	House Name	Sigismund		Active	
DUKE PRIM	Oct 24, 2016	Local ID	7259		Active	
BALTIMORE	Oct 24, 2016	Local ID	7992		Active	
BALTIMORE	Sep 07, 2016	House Number	CSFETUS1		Active	

## Sex Information

Reported By	Date	Sex	Comments
DUKE PRIM	Oct 24, 2016	Male	
BALTIMORE	Sep 07, 2016	Male	



# Duke Lemur Center

3705 Erwin Road  
Durham, NC 27705-5000

Phone: (919) 489-3364  
Fax: (919) 490-5394

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18 December 2018

To Whom It May Concern:

The Duke Lemur Center is applying for a CITES permit to export the following 1.1 *Propithecus coquereli* (Coquerel's sifaka) to the Cologne Zoo in Cologne, Germany.

Male, DLC# 7259 (studbook 305) Baltimore 7992 "Sigismund or Ziggy" born 10/24/16 at Baltimore Zoo (on loan from the Duke Lemur Center) . [Parents of this specimen are: Sire: 6797 "Gratian" (studbook 198) b: 04/14/02 at Duke Lemur Center, and Dam: 6828 "Anastasia" (studbook 209) b: 02/18/04 at Duke Lemur Center].

Female, DLC #7083 (studbook 264) St Louis Zoo 109438 "Martine" born 01/16/12 at St. Louis Zoo [parents of this specimen are: Sire: 6741 "Caligula" (studbook 182) b: 12/19/98 at Duke Lemur Center; and Dam: 6803 "Almirena" (studbook 199) b:12/23/02 at Duke Lemur Center].

Both of these specimens were born in captivity (7259 Sigismund born at Baltimore Zoo and 7083 Martine born at St Louis Zoo). Both sets of parents, were born in captivity at the Duke University Lemur Center, 3705 Erwin Road, Durham, NC 27705.

Thank you



Greg Dye, Interim Director  
Duke Lemur Center





## **The Duke Lemur Center**

### **Description of Facilities, Programs and Conservation Initiatives**

(October 2018)

Founded in 1967, the DLC is the world's leading institution dedicated to prosimian primate research, education and conservation. It is home to more lemurs than any place outside their native Madagascar. The Center is a magnet for scholarly activity, drawing students and researchers to Duke from around the world to study these critically endangered primates. Research conducted at the DLC has yielded unique insights in fields ranging from conservation, genetics, evolutionary biology and medicine to behavior and cognition. The Center collaborates with multiple partners in Madagascar to conserve and protect the world's only wild lemurs, their habitat and the unique biodiversity they represent.

#### **DLC Animal Collection**

The DLC houses only prosimian primates, primarily lemurs. The current DLC animal colony includes 227 animals, with 147 diurnal lemurs and 78 nocturnal lemurs and 2 lorises. There are also 73 DLC-owned animals on loan at 20 institutions globally. The DLC only loans animals to institutions accredited by the Association of Zoos and Aquariums (AZA) or the European Association of Zoos and Aquaria (EAZA). For animal acquisitions and dispositions, the DLC collaborates very closely with all of the prosimian Species Survival Programs and the Prosimian Taxon Advisory Group of the AZA. The DLC's animal acquisition and disposition policy has been approved by Duke's IACUC and adheres to AZA guidelines and regulations.





### **Staffing and Physical Plant**

The Duke Lemur Center's (DLC) staff consists of 36 full-time staff, 2 Post Docs, 2 grant-funded full time temporary employees and 2 part-time employees. The physical profile of the DLC is unique in that it has state-of-the-art living space that provides indoor housing during inclement weather and outdoor space during favorable conditions. Some buildings also allow direct access for lemurs to forested Natural Habitat Enclosures (NHEs) ranging in size from 1.5-14 acres. There are nine NHEs utilized by the lemurs year round when the weather is appropriate. These aspects of the Center's physical structure create an environment where lemurs thrive and researchers can study the different species in near natural conditions.



### **Animal Training**

The DLC supports an environment that focuses on providing optimal animal welfare. Staff utilizes positive reinforcement training techniques to minimize stress associated with routine husbandry, veterinary, and research procedures. The Center has a full time Behavioral Manager on staff that develops training plans and tracks animal progress learning selected behaviors. She works closely with the animal husbandry team to proactively identify potential behavioral concerns in colony animals and, when appropriate, develops behavioral action plans directed at modifying or eliminating the behavior.



*Voluntary ultrasound used to confirm aye-aye pregnancy*



*Training sessions utilized for conditioning naive free-ranging sifaka to the Natural Habitat Enclosures*



### **Public Education Programs**

25,000 visitors come for guided tours or special programs each year. By engaging scientists, students and the public in new discoveries and global awareness, the DLC promotes a deeper appreciation of biodiversity and an understanding of the power of scientific discovery. In addition to the programs and tours at the Center, the DLC also has created partnerships with local museums and conducts offsite presentations at these facilities as well as Universities and professional meetings internationally.

### **Research at the DLC**

The DLC accommodates all forms of non-invasive, non-harmful research. Typical fields of study include (but are not limited to) behavior, cognition, the physiology of aging, locomotion, energetics, communication, veterinary medicine, animal welfare, and torpor physiology. All research proposals and biological sample requests are approval by both the DLC Research Committee and by Duke University's Institutional Animal Care and Use Committee (IACUC). The DLC also maintains a large inventory of biological samples that are available for scientific study by qualified individuals (e.g. researchers) or institutions (e.g. academic research centers or museums).

Since its establishment in 1966, the Duke Lemur Center has accumulated detailed records for nearly 4,200 prosimian primates from over 40 closely related yet biologically diverse primate taxa. In 2014, data for over 3,600 of animals, representing 27 taxa, was made widely available by download at no cost through the new Nature journal *Scientific Data*, a peer-reviewed open-access data journal. The large sample sizes, exact dates of events, and longitudinal data spanning an animal's entire life make these datasets unique within the primate literature.

In addition to DLC conservation activities on the ground in Madagascar, many of the research projects done at the DLC or by DLC personnel in Madagascar have direct implications for conservation in Madagascar or are important for developing policies relevant to preserving lemurs in their native habitat. A list of projects specifically related to increasing knowledge of Coquerel's sifakas or other related sifaka species or having direct implications for in situ conservation is included in the table below.



Attachment 3: Duke Lemur Center	
<b>PROJECT TITLE</b>	<b>PI Last Name</b>
Climate crises: The impact of climate change on lemur behavior	Alspach
A study of variables affecting scentmarking behavior during <i>Propithecus coquerli</i> breeding season	Baldwin
Lemur leukocyte responses to parasitic infection	Brinkworth
Retrospective analysis of <i>Propithecus coquerli</i> mortality	Cassady
Seed germination and dispersal by two species of lemurs	Chieffe
Play behaviors in Coquerel's sifakas	Dawkins
Developing a mobile lab for species identification in Madagascar	Greene
A comparative study of gut microbiomes in folivorous lemurs: Effects of captivity, habitat, and evolutionary history	Greene
Exploring the links between gut microbiomes and Cryptosporidium infection in Coquerel's sifakas	Greene
A simple, economical protocol for field DNA analysis	Guevara
Impact of human-animal interactions on the behaviour of captive Coquerel's sifaka	Januszko
The effects of anthropogenic disturbance on cortisol concentrations, vigilance behavior, and the gut microbiome, in the Milne-Edwards' sifaka, <i>Propithecus edwardsi</i>	Lamb
High-throughput sequencing of expressed antibodies in Coquerel's sifaka	Larsen
Single-molecule real-time sequencing elucidates the adaptive immune response of Coquerel's sifaka	Larsen
Behavioral response of three lemur species ( <i>Lemur catta</i> , <i>Eulemur rufifrons</i> , <i>Propithecus coquerli</i> ) to a non-Malagasy carnivore, grey foxes ( <i>Urocyon cinereoargenteus</i> )	Lile
<i>Propithecus coquerli</i> infant development: Father dependence, group size and infant weight effect on developmental landmarks	McMath
Direct maternal investment in female <i>Propithecus coquerli</i> infants and juveniles	Minasandram
Exploring the relationships between stressors and cortisol production in captive and wild sifakas	Mogan
Identification of sick versus healthy Coquerel's sifaka infant weights	Morgan
Effects of age on behavioral thermoregulation in <i>Propithecus coquerli</i> and <i>Lemur catta</i>	Murray
Communicative and expressive behaviors in <i>Propithecus coquerli</i> , <i>Varecia variegata</i> and <i>Lemur catta</i>	Rickli
Experimental sequencing of the sifaka genome using novel technology	Rogers
Exploring stress physiology in captive and wild sifaka	Semel
Gene flow and the role of barriers in species diversification	Westphal
Feasibility of measuring acute phase proteins in <i>Propithecus coquerli</i>	Williams
Developing PCR procedures for rapid assessment of blood borne pathogens	Williams
Comparison of daily activity pattern in captive and wild lemurs	Wunderlich



### **DLC Conservation Programs in Madagascar**

The DLC has had an active Madagascar conservation program for 30 years. Programs that specifically support conservation of Coquerel's sifaka and closely related species are described below as well as programs that indirectly benefit the species through forest and habitat protection, poaching prevention, environmental education, research and related activities.

In 2017 the Duke Lemur Center initiated a new conservation project in Madagascar, in collaboration with the Government of Madagascar's Wildlife Division, Ministry of the Environment, Ecology and Forests (MEEF). The aims of this project are to advance ex-situ lemur conservation, management and welfare in Madagascar's 14 zoos through:

- Training in husbandry and collection management
- Establishment of an animal records system and national database of the ex-situ lemur collections, to be linked to the global zoological communities Zoologic Information Management System (ZIMS)
- Establishment of cooperative breeding programs, with the first priority being the program for Coquerel's sifaka
- Development of guidelines for the management of confiscated lemurs
- Development of a zoo Code of Ethics to stop the Malagasy zoos from contributing to capturing wild lemurs for display.

In August, DLC and MEEF staff conducted site visits to two of the Malagasy zoos that hold Coquerel's sifakas. In total, MEEF reports that there are 51 sifakas in eight zoos in Madagascar. If well-managed in a cooperative breeding program, these collections could provide animals for future reintroduction and reinforcement of wild populations of Coquerel's sifaka. The DLC recently received a major grant from AZA's Conservation Grants Fund to support publication of a Lemur Care Manual and a training course in Madagascar in spring 2019 to further the activities listed above.

In addition to the new ex-situ conservation work described above, the DLC contributes to in-situ conservation of two closely related sifaka species, the silky sifaka (*Propithecus candidus*), and diademed sifaka (*Propithecus diadema*) through other mechanisms.





*Propithecus candidus*- Silky sifaka

### The SAVA Project

In 2012 the DLC launched a new conservation initiative in northeastern Madagascar which features community-based conservation alongside research and student programs in addition to support for Madagascar National Parks to improve protection of lemurs and their habitat. The project is located in the SAVA (Sambava-Andapa-Vohemar-Antalaha) region of northeastern Madagascar. This region contains over 820 square kilometers of mountainous primary rainforest in protected areas which include Marojejy National Park, home to the highly endangered silky sifaka (*Propithecus candidus*), in addition to 12 other threatened or endangered lemur species. The mission of SAVA Conservation is to encourage biodiversity conservation through collaborations with

local environmental organizations and governmental institutions to promote environmental education, reforestation, and protection of Marojejy National Park. Survival of the silky sifaka (*Propithecus candidus*) is enhanced in Marojejy National Park by supporting the National Park guides that patrol the region and enforce Park boundaries and anti-poaching regulations. An important component of the DLC's SAVA Conservation program is working closely with local communities to improve the livelihoods of rural people in forest-bordering communities so that they become active partners in protecting local forests, and regional biodiversity which are critical habitat to endangered lemurs. The project has printed and distributed anti-poaching posters in the SAVA region to educate the local community of the negative impacts of hunting lemurs. More detailed information of the SAVA Conservation Initiative programs including environmental education teacher training materials, reforestation protocols, and anti-poaching posters are available upon request.) The DLC's SAVA Conservation program has a budget of \$150,000 - \$225,000 annually.

Through the DLC's leadership and support of the Madagascar Fauna and Flora Group (MFG), a consortium of zoos and other institutions committed to supporting conservation in Madagascar, the continued survival of the diademed sifaka (*Propithecus diadema*) in Betampona Natural Reserve is ensured. Betampona, is a protected natural forest and is the site of the first reintroduction of captive born lemurs back to the wild, a collaborative DLC/MFG effort. The reintroduction evolved into an important program of conservation research and ecological monitoring, with education and reforestation components.



Thanks in part to DLC financial support and MFG presence in Betampona, the reserve has been protected from illegal wood cutting and wildlife poaching by increased protection of the reserve, an active presence of Malagasy and international researchers studying conservation and biodiversity related topics, and capacity building through the support of Malagasy university students doing graduate projects in environmental sciences in the region. The DLC's Program Manager for Madagascar Conservation Initiatives is a member of the MFG Executive Committee, and DLC contributions to the MFG are valued at \$10,000/year for in-kind and direct support.



Diademed sifaka – *Propithecus diadema*

The long term survival of the diademed sifaka is also supported by a multi-institutional conservation research project led by DLC's Curator monitoring the long-term health impacts of forest disturbance on wild diademed sifakas and three other critically endangered lemur species living near a major nickel & cobalt mining site in eastern Madagascar. The study is a long term longitudinal project evaluating disease prevalence, nutritional status, and chronic stress parameters in lemurs displaced by mining activities over a multi-year time frame. The results of this project contribute to developing a better understanding of the ability of wild sifaka and sympatric lemur species to adapt to human induced habitat alteration where anthropogenic activities such as mining and deforestation are becoming increasingly significant. Data generated through this project has direct implications for the development of policy and management protocols aimed at protecting wild Coquerel's sifaka as habitat loss continues.

## Attachment 4

### Curriculum vitae

<b>Name</b>	<b>Bernd Marcordes</b>
<b>Address</b>	Cologne Zoo Riehler Strasse 173 50735 Cologne Germany
<b>Office-No.</b>	0049 (0)221 7785108
<b>Mobile</b>	
<b>Email</b>	marcordes@koelnerzoo.de
<b>Date of birth</b>	
<b>Place of birth</b>	
<b>Nationality</b>	

### **Professional Experience**

	Curator at the Zoological Garden Cologne, Germany <ul style="list-style-type: none"><li>• Responsible for birds and lemurs</li><li>• Responsible for the monitoring of the health status for all animals</li><li>• Engaged in the teaching of keeper trainees, bird keepers from other zoos and students of the university of Cologne</li><li>• Coordinator of the Zoo's Nature Conservation Projects in Indonesia and Madagascar</li></ul>
	Curator at the Vogelpark Walsrode, Germany <ul style="list-style-type: none"><li>• Responsible for all birds species</li><li>• Head of zoological department</li></ul>



## Curriculum vitae

<b>Name</b>	<b>Dr. med.vet. Sandra Marcordes</b>
<b>Address</b>	Cologne Zoo Riehler Strasse 173 50735 Cologne Germany
<b>Office-No.</b>	0049 (0)221 7785103
<b>Mobile</b>	
<b>Email</b>	Sandra.marcordes@koelnerzoo.de
<b>Date of birth</b>	
<b>Place of birth</b>	
<b>Nationality</b>	

### Professional Experience

- |  |   |
|--|---|
|  | <p>Responsible Veterinarian at Cologne Zoo</p> <ul style="list-style-type: none"><li>• Veterinary care of the whole livestock of Cologne Zoo including general and further diagnostics like radiography, ultrasonography, laboratory work, distance immobilization, prophylaxis and therapy.</li><li>• Responsible for the monitoring of the nutrition plans for all animals</li><li>• Engaged in the teaching of keeper trainees and students of the university of Cologne</li></ul> |
|  | <p>Responsible Veterinarian at Zoo Duisburg, Germany and</p> <ul style="list-style-type: none"><li>• Nutrition inspector</li><li>• Curator for the ape and monkey house and the "Bongo area" including tigers, greater kudus, bongos, African wild dog and red pandas</li></ul>   |



Responsible Veterinarian at Zoo Duisburg, Germany

- Veterinary care of the whole livestock of Zoo Duisburg including general and further diagnostics like radiography, ultrasonography, endoscopy, laboratory work, distance immobilization, prophylaxis and therapy.
- Responsible for the monitoring of the nutrition plans for all animals
- Engaged in the teaching of keeper trainees
- 

Assistant Veterinarian and doctoral candidate at Zoo Duisburg

- Doctoral thesis: Establishment of an anesthesia protocol for the fossa (*Cryptoprocta ferox*) with the use of ketamine and medetomidine
- Anesthesia of 14 fossas at Zoo Duisburg, Germany
- 6 weeks at the field station of the German Primate Center in Kirindy, a dry forest in Western Madagascar in October 2011
- Anesthesia of two fossas at Zoo Heidelberg, Germany
- Anesthesia of one fossa at Tierpark Hamm, Germany
- Anesthesia of one fossa at Zoo Frankfurt, Germany

•



# Duke Lemur Center

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## Attachment 5

December 12, 2018

To Whom It May Concern:

The Coquerel's sifaka Species Survival Plan (SSP) of the Association of Zoos and Aquariums (AZA) supports the transfer of eight captive born animals from Duke University Lemur Center (DLC) to four zoological institutions within Europe. This application pertains to the transfer of one pair being sent to Köln Zoo (Cologne Zoo), Köln, Germany.

The Coquerel's sifaka (*Propithecus coquereli*) is a prosimian primate endemic only to Madagascar. This species is classified as endangered by the International Union for the Conservation of Nature (IUCN), with habitat destruction being the greatest threat to their survival in the wild. Outside of Madagascar, only the United States house these lemurs in captivity, with 66 animals in 13 institutions. All of these animals are currently owned by the DLC and are managed by the SSP under the umbrella of the AZA. In an effort to improve captive propagation for the Coquerel's sifaka as a hedge against extinction, a global initiative was created to establish a captive breeding population in Europe. Such a partnership brings new expertise and much needed space to the program and this development of a global population is critically necessary to expand and strengthen captive breeding and develop a better understanding of how to best support in-situ conservation efforts in Madagascar.

Köln Zoo has expressed strong interest in housing and breeding this species. This institution has been working with the SSP Coordinator, and the DLC to bring this project to fruition. The DLC has well established and proven husbandry, veterinary and housing procedures for maintaining the species in captivity. These protocols have been shared with the European institutions slated to receive the animals and the DLC will provide on-going support in the way of behavioral, veterinary, and nutritional consultations as well as breeding recommendations once the animals are established in their new institution.

In addition, a site visit was conducted by the DLC Primate Technician Supervisor and SSP Coordinator Britt Keith, to evaluate the zoo's facilities as well as husbandry and veterinary expertise and ensure it is well equipped to manage the species at levels equal to or exceeding those required by AZA institutions in the United States.

In my role as the SSP Coordinator for Coquerel's sifakas with the best interests of the breeding program for the species, and with the support of the Prosimian Taxon Advisory Group, I strongly recommend approval of the transfer of animals listed on the permits from the U.S. to Europe. Please contact me if you have any questions or require further information.

Sincerely,

Britt Keith, MS  
SSP Coordinator for Coquerel's sifakas  
Primate Technician Supervisor, Duke Lemur Center

Christie Eddie  
Chair, Prosimian Taxon Advisory Group  
Curator of Small Mammals, Omaha's Henry  
Doorly Zoo & Aquarium





# Duke University Lemur Center

3705 Erwin Road  
Durham, NC 27705-5000

Phone: (919) 489-3364  
Fax: (919) 490-5394

## LOAN AGREEMENT

Between

**DUKE LEMUR CENTER**

And

**COLOGNE ZOO**

Whereas, the **Duke Lemur Center**, herein called the **DLC**, is interested in the captive propagation and preservation of wildlife, and

Whereas, **Cologne Zoo**, herein called **CZ**, is interested in the captive propagation and preservation of wildlife;

Therefore, both parties do hereby enter into an agreement defined by the terms listed below, regarding the following specimens:

### ***Propithecus coquereli* (Coquerel's sifaka)**

Studbook 264, DLC 7083, SLZ 109438 "Martine" b: 16 January 2012, currently at St. Louis Zoo, to be returned to DLC before shipment to Germany. Transponder: 00-6CA-602A

Studbook 305, DLC 7259, BZ 7992 "Sigismund" aka "Ziggy" b: 24 October 2016, currently at Baltimore Zoo, to be returned to DLC before shipment to Germany.

1) CZ has received the above-mentioned specimens owned by the DLC for the purposes of:

#### **SSP mandated captive breeding**

2) CZ agrees to provide necessary housing, food and veterinary care for the specimens in accordance with EAZA standards and codes, and in accordance with local and national animal welfare regulations. In the event of serious injury, illness, or death of the specimen, CZ will promptly inform the DLC of the condition and consult with them.

3) CZ agrees to follow (to the very best of its ability) any special housing, husbandry, breeding, parturition and veterinary guidelines as provided by the DLC for this species' care and management, and to consult with DLC in the case of any constraints in following guidelines.

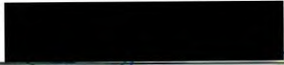
- 4) In the case of a loan for captive propagation, CZ will attempt to breed the specimens and any viable young produced by such breeding and born during the term of this agreement, or within a period after termination of this agreement measured by the normal gestation length of the species will remain property of the DLC.
- 5) In the case of a loan for display, CZ agrees not to breed the specimen without prior consultation with and approval from the DLC.
- 6) All transportation charges from the DLC to CZ shall be borne by CZ. These charges may include costs of permits, shipping crates, broker fees, air transport of animals, as well as cost of one DLC staff member accompanying animal during transport. In the event of termination of this agreement, transportation of the specimen to the DLC or its designated institution shall be borne by the party requesting termination of the loan.
- 7) CZ agrees to provide at least one primary keeper with at least 2 days of comprehensive sifaka infant husbandry training at the DLC, at its cost.
- 8) CZ agrees to provide the DLC with a written report at the end of each calendar year which lists the status of the specimen covered by this agreement, the number of young born during the previous year, and the number of specimens that died along with the cause of death. Upon termination of this agreement, a copy of all pertinent records regarding the specimens will be sent to DLC.
- 9) For any research project in which the specimens may be subjected to manipulation, stress or high risk procedures (i.e. any research which is not purely observational), permission must first be obtained, in writing, from the DLC Research Coordinator. (Dr. Erin Ehmke, [erin.ehmke@duke.edu](mailto:erin.ehmke@duke.edu) (919) 401-7246)
- 10) In the event of the specimen's death, the carcass and its parts remain property of the DLC. The DLC Research Coordinator (Dr. Ehmke, contact info as above) should be contacted as soon as possible after death. The final disposition of the carcass and parts will be the decision of the DLC.
- 11) This agreement shall remain in effect for the lifetime of the specimen, unless one of the parties terminates the agreement by giving the other party 180 days written notice.
- 12) This agreement may be amended or modified in writing by the mutual consent of both parties hereto. Such amendments shall be incorporated into this agreement as an addendum.
- 13) Neither this agreement nor any rights or privileges granted hereunder shall be assigned to a third party without the prior written consent of both parties.



14) DLC agrees that in the event of disease, injury, or death of any animal, CZ and its employees or volunteers shall not be responsible to DLC, unless the disease, injury, or death was the result of negligence or intentional acts of CZ or its employees or volunteers. The DLC hereby waives any claim of any kind against CZ.

15) CZ agrees to indemnify and hold Duke University harmless from any liability for personal injury or property damage resulting from any accident, escape of the loaned specimens, aggressive behavior of the specimens or any other mishap occurring during the period that the specimens are on loan to CZ.

16) The welfare of the specimens and integrity of the propagation program shall be the sole goal of arbitration of any conflict or dispute arising from this agreement. The parties agree that in the event of a conflict or dispute, a non-involved member of the Association of Zoos and Aquariums and a non-involved member of the European Association of Zoos and Aquaria, agreeable to both parties, shall act as arbitrators. Moreover, both institutions shall abide by said arbitrators' decision.


Signature: 

FOR: Duke Lemur Center

Name (print): Cathy Williams

Title: Curator, Living Collection

Date: 8/27/18

Signature: 

FOR: Cologne Zoo

Name (print): THEO B. PAGEL

Title: CEO, COLOGNE ZOO

Date: 1.10.2018

**PROF. THEO B. PAGEL**  
VORSTANDSVORSITZENDER  
AG ZOOLOGISCHER GARTEN KÖLN  
RIEHLER STRASSE 173  
50735 KÖLN

WARNING - Original document has LineMark™ lines in the paper that change from light to dark in reflected to transmitted light.

Duke Corporate Accounts Payable  
Box 104131  
Durham, NC 27708  
(919)684-3112



Date: 09/26/2018

66-156  
531

\*\* ONE HUNDRED DOLLARS AND ZERO CENTS \*\*

AMOUNT

\$\*\*\*\*\*100.00

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Chapel Hill, NC 27514

Authorized Signature

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