



Department of the Interior
U.S. Fish and Wildlife Service

OMB No. 1018-0093
Expires 05/31/2017

Federal Fish and Wildlife Permit Application Form

Return to: Division of Management Authority (DMA)
U.S. Fish and Wildlife Service
4401 N. Fairfax Drive, Room 212
Arlington, VA 22203
1-800-358-2104 or 703-358-2104

Type of Activity:
EXPORT/RE-EXPORT/IMPORT/INTERSTATE AND FOREIGN COMMERCE/TAKE OF ANIMALS (LIVE/ SAMPLES/PARTS/PRODUCTS) (ESA and/or CITES)
(circle/highlight proposed activity)

New Application
 Requesting Re-issuance/Amendment of Permit#: _____

Complete Sections A or B, and C through H of this application. U.S. address may be required in Section C, see instructions for details. See attached instruction pages for information on how to make your application complete and help avoid unnecessary delays.

A. Complete if applying as an individual			
1 a. Last name	1 b. First name	1 c. Middle name or initial	1 d. Suffix
2. Date of birth (mm/dd/yyyy)	3. Social Security No.	4. Occupation	5. Affiliation/ Doing business as (see instructions)
6 a. Telephone number	6 b. Alternate telephone number	6 c. Fax number	6 d. E-mail address

B. Complete if applying on behalf of a business, corporation, public agency, Tribe, or institution			
1 a. Name of business, agency, Tribe, or institution Disney's Animal Kingdom		1 b. Doing business as (dba)	
2. Tax identification no. 95-2412883	3. Description of business, agency, Tribe, or institution Zoological Theme Park		
4 a. Principal officer Last name Ogden	4 b. Principal officer First name Jacqueline	4 c. Principal officer Middle name/ initial J	4 d. Suffix
5. Principal officer title Vice President		6. Primary contact name Lynn McDuffie	
7 a. Business telephone number 407-939-6237	7 b. Alternate telephone number 407-939-2468	7 c. Business fax number 407-939-6240	7 d. Business e-mail address Lynn.McDuffie@disney.com

C. All applicants complete address information					
1 a. Physical address (Street address, Apartment #, Suite #, or Room #; no P O Boxes) 1200 N. Savannah Circle East					
1 b. City Bay Lake	1 c. State FL	1 d. Zip code/Postal code 32830	1 e. County/Province Orange	1 f. Country USA	
2 a. Mailing Address (include if different than physical address; include name of contact person if applicable) P. O. Box 10000					
2 b. City Lake Buena Vista	2 c. State FL	2 d. Zip code/Postal code 32830	2 e. County/Province Orange	2 f. Country USA	

D. All applicants MUST complete	
1. Attach check or money order payable to the U.S. FISH AND WILDLIFE SERVICE in the amount of \$100 nonrefundable processing fee. 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. Do you currently have or have you ever had any Federal Fish and Wildlife permits? Yes <input checked="" type="checkbox"/> If yes, list the number of the most current permit you have held or that you are applying to renew/re-issue: LE836412-1 No <input type="checkbox"/>	
3. Certification: I hereby certify that I have read and am familiar with the regulations contained in Title 50, Part 13 of the Code of Federal Regulations and the other applicable parts in subchapter B of Chapter 1 of Title 50, 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 (in blue ink) of applicant/person responsible for permit (No photocopied or stamped signatures)	Date of signature (mm/dd/yyyy) 10/30/2015

E. EXPORT/RE-EXPORT/IMPORT/INTERSTATE AND FOREIGN COMMERCE/TAKE OF NON- NATIVE ANIMALS (Live/samples/parts/products) (CITES and/or ESA)

Allow at least 90 days for the application to be processed. Applications for endangered species permits must be published in the Federal Register for a 30-day public comment period.

Complete all questions on the application. Mark questions that are not applicable with "N/A". If needed, use a separate sheet of paper. On all attachments or separate sheets you submit, indicate the application question number you are addressing. If you are applying for multiple specimens, be sure to indicate which specimen you are addressing in each response.

1. What activity are you requesting authorization to carry out (Indicate appropriate activities):

EXPORT IMPORT
 INTERSTATE COMMERCE FOREIGN COMMERCE

*Interstate Commerce permits authorize the sale of endangered and threatened species across State lines, but only for that will contribute to enhancing the propagation or survival of that species. Captive-breeding alone will not generally meet this requirement. Scientific research must be related to the species to be permitted. Interstate commerce activities with wildlife require the buyer to obtain a permit prior to the sale.

2. For EACH animal/specimen involved in the proposed activity provide:

Scientific name (genus, species, and, if applicable, subspecies)	Common Name	Birth/Hatch Date (mm/dd/yyyy) Or Approximate date	Quantity	Gender, if known	Permanent markings (e.g. tattoo, ID #, microchip #, scars), if alive	Type of Sample or product (e.g., blood, tissue, DNA)
EXAMPLE: <i>Macaca fascicularis</i>	Crab-eating macaque					
<i>Macaca silenus</i>	Lion-tailed Macaque	11/14/2005	1	F	GAN: MIG12-29426077 Transponder: 968000005121039	
<i>Macaca silenus</i>	Lion-tailed Macaque	12/30/2006	1	F	GAN: MIG12-29426076 Transponder: 968000005139953	
<i>Macaca silenus</i>	Lion-tailed Macaque	12/26/2008	1	F	GAN: MIG12-29426074 Transponder: 968000005146540	

This information was obtained from this animal's ZIMS Specimen Report. A copy is attached (See Addendum A – ZIMS Specimen Report).

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

Name: Cologne Zoo
Address: Zoologischer Garten Köln
Riehler Straße 173
City: Köln
State/Province: North Rhine-Westphalia
County, Postal Code: Germany 50735

4. Recipient/Sender:

- If export, provide name and address of the recipient in the foreign country.
- If import, provide name and address of the exporter in the foreign country.
- If interstate or foreign commerce, provide name and address of recipient.

Name: Cologne Zoo
Address: Zoologischer Garten Köln
Riehler Straße 173
City: Köln
State/Province: North Rhine-Westphalia
County, Postal Code: Germany 50735

F. SOURCE OF SPECIMEN (answer question 5 or 6 for each animal/specimen involved, as appropriate).

5. For each animal or animal from which specimen are obtained born in captivity:

- a. If you are the breeder of the specimen(s), please provide a signed and dated statement that includes the following:
- Scientific name (genus, species, and, if applicable, subspecies) and common name;
 - That the animal was bred and born at your facility;
 - Birth/hatch date (mm/dd/yyyy), and, if applicable, identification information (as described in question 2b above);
 - Name and address of your facility where each animal was bred and born; and
 - Location (Name of facility, address, city, State/province, postal code) of parental stock.

This permit application is for the import of three (3) captive bred female Lion-tailed Macaque from the Cologne Zoo. These Lion-tailed Macaques were born and raised there.

- b. If you are NOT the breeder of the specimen(s), provide copies of documentation showing that you acquired the animal from the breeder or documentation demonstrating the history of transactions (e.g., chain of ownership of the animal) and a signed and dated statement from the breeder or breeder's record that clearly includes the following:

- Scientific name (genus, species, and, if applicable, subspecies) and common name;

Macaca silenus, Lion-tailed Macaque

- That each animal was bred and born/hatched at his/her facility;

These three (3) females Lion-tailed Macaques were bred and born at the Cologne Zoo. This information

was obtained from this animal's ZIMS Specimen Report. A copy is attached (See Addendum A – ZIMS Specimen Report).

iii. Birth/hatch date (mm/dd/yyyy), and, if applicable, identification information (as described in question 2b above);

Here are the dates of birth and other identifiers for each of the females:

Date of Birth was November 5, 2005. Other Identifiers include the following:

House Name: Dorothee
Transponder: 968000005121039
International Studbook Number: 3176
Regional Studbook Number: EAZA/3176
Local ID: 3403
GAN: MIG12-29426077

Date of Birth was December 30, 2006. Other Identifiers include the following:

House Name: Emily
Transponder: 968000005139953
International Studbook Number: 3206
Regional Studbook Number: EAZA/3206
Local ID: 3596
GAN: MIG12-29426076

Date of Birth was November 5, 2005. Other Identifiers include the following:

House Name: Kurzschwanz
Transponder: 968000005146540
International Studbook Number: 3403
Local ID: 3848
GAN: MIG12-29426074

This information was obtained from this animal's ZIMS Specimen Report. A copy is attached (See Addendum A – ZIMS Specimen Report).

iv. Name and address of the breeder's facility; and

Cologne Zoo
Zoologischer Garten Köln
Riehler Straße 173
Köln
North Rhine-Westphalia
Germany 50735

v. Location (name of facility, address, city, State/province, postal code) of parental stock.

Sire was captive born at:

Colchester Zoo (extinct institution)
Maldon Road
Stanway
Essex
United Kingdom CO3 0SL

He was acquired from Zoo Parc Overloon in the Netherlands in July 2002. He was sent to Zoologischer Garten Wuppertal in Germany in January 2009 where he remains.

Dam was captive born at:
Zoo Dresden GmbH
Tiergartenstraße 1
Dresden
Germany 01219

She currently resides at the Cologne Zoo (since June 2002).

6. **For each animal/specimen taken from the wild, provide the following:**
- a. **Scientific name (genus, species, and, if applicable, subspecies) and common name;**
 - b. **Specific location of where, when, and by whom (name and address) the specimen was removed from the wild;**
 - c. **Purpose of removal and length or approximate length of time held in captivity;**
 - d. **Describe your efforts to use captive specimens (e.g., captive-born, captive-held), or parts thereof, in lieu of taking animals from the wild.**
 - e. **Copies of your foreign or domestic collecting permit, license, contract or agreement;**
 - f. **Documentation showing that the specimen(s) was legally obtained by the applicant; and**
 - g. **Copies of any applicable State, Tribal, Federal, or Foreign government permits or licenses that authorized the removal of this animal from the wild.**

This permit application is for the import of three (3) captive bred female Lion-tailed Macaques from the Cologne Zoo. These three (3) female Lion-tailed Macaques were born and raised there and were not removed from the wild.

G. JUSTIFICATION FOR REQUESTED ACTIVITY.

7. **Provide a full statement justifying the proposed activity, particularly the following:**
- a. **Describe the purpose of your proposed activity. For example, if the purpose is scientific research, attach a copy of your research proposal outlining the purpose, objectives, methods (e.g., specific information on survey/collection methods, sampling regime, equipment to be used), and whether similar work has already been done or is currently being done. If the purpose is conservation education, provide copies of educational materials (e.g., handouts, text of signage or public presentations), and include the purpose and objectives of the proposed activity. If the purpose is for propagation for conservation purposes, provide a description of how the species will be propagated, disposition of progeny, and cooperative agreements that are/will be established for re-introduction.**

This import permit application is for the proposed activity of propagation for conservation purposes. The three (3) females that we are requesting to import will represent a new bloodline and therefore will help to enhance the genetic diversity of the captive population in the US. In addition to these females, Disney will be acquiring a male to form a breeding group here at Disney's Animal Kingdom. According to ISIS, the current population of Lion-tailed Macaques in the United States consists of 17 males and 23 females. According to the ZIMS Age Pyramid for the Lion-tailed Macaque population in the United States, there are very few breeding age females (See Addendum B – Lion-tailed Macaque Age Pyramid and Population Overview). The youngest female in the current population is 18 years of age. These females are 9, 8, and 6 years of age. These females are prime breeding age which the US population needs. This import is fully supported by the Lion-tailed Macaque SSP (See Addendum C – Support Letter from Lion-tailed Macaque SSP Coordinator). This import is part of a coordinated effort between the Association of Zoos and Aquariums (AZA) and the European Association of Zoos and Aquaria (EAZA) to increase the genetic diversity of the US population. This import supports the goals of the Lion-tailed Macaque SSP and the Old World Monkey TAG by increasing the genetic diversity of the AZA captive Lion-tailed Macaque population. Any progeny produced will be managed and dispositioned in accordance with the directives of the Lion-tailed Macaque SSP and the Old World Monkey TAG.

One of the focuses for Disney's Animal Kingdom is our long term commitment to conservation and education relating to the preservation of the biodiversity of nature. This commitment to conservation will be accomplished by making an effort to educate and inform our guests (both foreign and local) as to the role they

can play in saving habitats and species, like the lion-tailed macaques, throughout the threaten ecosystems. Information will be shared with our guests by trained and knowledgeable staff. They will be sharing natural history and conservation information to educate our guests on lion-tailed macaques. Please see attached for the information that our staff will be sharing with our guests.

Since its founding in 1995, the Disney Conservation Fund has contributed millions of dollars in support conservation programs in more than 112 countries around the world. Most recently, the Disney Conservation Fund joined forces with DisneyNature to make a donation to Conservation International to help protect macaques and other endangered species and their habitat in Southeast Asia, in conjunction with the DisneyNature movie, *Monkey Kingdom*. In addition, the Disney Conservation Fund has donated over \$100,000 since 2000 to help protect the habitats of the lion-tailed macaques in India.

The specific projects include:

Conserving India's Lion-Tailed Macaques

The Disney Conservation Fund partnered with the Wildlife Conservation Society in 2015 to map lion-tailed macaque populations in the rainforests of Western Ghats, India. The project will enable researchers to identify threats to the species and implement conservation actions, including rural education programs on macaque ecology and conservation.

Macaques in Kudremukah National Park

In 2014, the Disney Conservation Fund supported the India Program Centre for Wildlife Studies to assess lion-tailed macaques in Kudremukah National Park. The park and its surrounding landscapes are considered the largest contiguous habitat for lion-tailed macaques. The project helped train youth living in local communities to monitor and map monkey groups and identify threats faced by the species to develop a list of possible interventions.

King Cobra Conservation in India

Working with the University of Arizona in 2009, the Disney Conservation Fund provided \$19,700 in support to develop and implement a state-of-the-art educational program that engages local communities and students in the conservation of king cobras and their habitat. In addition, the project developed and implemented a conservation plan in partnership with decision makers with support of the local community.

Hornbill Conservation Program

This Wildlife Conservation Society initiative, supported from 2005 to 2008 and totaling \$75,000, worked with indigenous communities to ensure the conservation of globally significant forests. These forests are home to a wide variety of animals including the flagship species hornbills. This program encouraged community participation in conservation through integrated activities that foster wildlife conservation through community welfare.

Tiger and Prey Study in India's Tropical Dry Forests

In 2000, DWCF provided \$20,000 in support to the National Fish and Wildlife Foundation to formulate conservation strategies for improved management of tigers and their prey in the dry forests of India.

Disney and the Disney Conservation Fund have a long history of supporting conservation efforts both with education and monetary donations. The Disney Conservation Fund educates visitors to their website by including information on funded projects through an interactive Google Earth map. To learn more about the Disney Conservation Fund, visit www.disney.com/conservation (See Addendum D – Lion-tailed Macaque Species Profile).

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

The technical expertise of the management staff responsible for management, care and maintenance of the primate collection at Disney's Animal Kingdom have more than 65 years of combined experience working with primates. The management staff consists of the Animal Operations Director, the Animal Operations Manager (curator) and four (4) Zoological Managers. The management staff has experience with facility design as well as the day-to-day husbandry practices including successful breeding and rearing. In addition, the keeper staff for the primate carnivore team and our veterinarians have over 175 combined years of primate experience. (Please see Addendum E – Management Staff's curricula vitae).

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

Attached is a copy of the donation letter that has been sent to the Cologne Zoo for their signature. We have not received the signed letter back as of the date of mailing this permit application. (See Addendum F – Copy of Donation Letter)

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

The import of these female Lion-tailed Macaques will help to enhance the genetic diversity of the captive population in the US by introducing a new bloodline and younger animals. This import is part of the concerted efforts of the AZA and EAZA in global management of many species of primates. This import is one of several planned for bringing Lion-tailed Macaques into the US.

Disney's Animal Kingdom and the Disney Worldwide Conservation Fund have been involved with Lion-tailed macaque *in-situ* work since 2014. In 2014 Disney partnered with the Wildlife Conservation Society (WCS) to assist WCS with their project in Kudremukah National Park and its surrounding landscapes have been identified as one of the four regions harboring viable populations of Lion-tailed macaques. This area is the largest contiguous habitat for the species and may be home to as many as 40 groups. As a result this area has received the highest level of protection from the government of India. The funds (\$9,955.00) provided by Disney in 2014 were used to help train youth living in local communities to monitor the monkeys; develop an accurate map of lion-tail macaque groups within the park using local youth to record the information; and identify threats faced by the species in this region and develop a list of possible interventions.

In 2015 Disney's Animal Kingdom and the Disney Conservation Fund partnered with the Wildlife Conservation Society (WCS) to continue their work in Western Ghats, India. The lion-tailed macaque is a highly endangered primate species, endemic to the rainforests of Western Ghats, India. The goal of this project is to enhance viability of half of the known population that resides in the northern range. This will be accomplished by mapping distribution, threats and indigenous knowledge; implementing interventions to mitigate threats to macaque survival and hold rural education programs on macaque ecology and conservation.

A summary of their project is attached (See Addendum G – Disney's Support of In-situ Lion-tail Macaque Conservation 2014 to present). Disney has provided funding and assistance for this project

In addition Disney's Animal Kingdom in accordance with the AZA Lion-tailed Macaque SSP will breed and maintain this species. Disney's Animal Kingdom is active member of the AZA Lion-tailed Macaque SSP and is very supportive of the global management of this species between the different regions of the world. In 2012 AZA (including staff from Disney's Animal Kingdom) and EAZA met to begin discussion and work towards a global management initiative for species, such as Lion-tailed Macaques in human care. In June 2014 another meeting was held in The Netherlands with AZA (including staff from Disney's Animal Kingdom), EAZA and representatives from the Australasia region to continue the work on this initiative. In 2015 in Sarasota, Florida another meeting was held between the AZA Old World Monkey TAG and the EAZA Old World Monkey TAG Chair to continue the work on this initiative. This import is the result of this work.

One of the focuses for Disney's Animal Kingdom is our long term commitment to conservation and education relating to the preservation of the biodiversity of nature. This commitment to conservation will be accomplished by making an effort to education and inform our guests (both foreign and local) as to the role they can play in saving habitats and species, like the Lion-tailed Macaque, throughout the threaten ecosystems. Trained and knowledgeable staff will be sharing natural history and conservation information to educate our guests on Lion-tailed macaques. (See Addendum D – Lion-tailed Macaque Species Profile).

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

- a. **Provide a detailed description (e.g., size, construction materials, protection from the elements) and photographs or diagrams (no blueprints, please) clearly depicting the existing facilities where the wildlife will be maintained. If the specimens will be housed at multiple facilities, either immediately or within the next year, provide a full description of each facility. If you are unsure of which facilities may be receiving specimens (e.g., SSP has not made final decision), please indicate likely candidates and the mechanism that will be used to determine recipient facilities.**

Lion-tailed Macaque Facilities Description

Holding:

Holdings consist of four holding spaces 6'Wx 12'L x 9'-11' H (72 sq' each x 4 = 288 sq'). The pens are constructed from 10 gauge 1'x1' stainless steel mesh. Each of the common mesh wall between the holding spaces has 2 elevated sliding shift doors allowing for versatility in managing the group, including full access between all 4 holding spaces to individual stall isolation.

There is an overhead transfer chute for shifting animal to and from the exhibit space. The transfer chute includes a sliding shift door into each of the 4 holding spaces. It also has several shift doors throughout the length of the chute to control the travel of the monkeys (see attached drawings for details). A series of hinged drop down pans are attached to the bottom of the transfer chute for maintaining a sanitary keeper work space.

Each holding space has: several perching benches mounted at multiple levels, a Lixit water valve, multiple tie-off rings for mounting a variety of climbing apparatuses and environmental enrichment.

The building includes a food prep area with a combo refrigerator freezer, stainless steel sink, countertop and shelves and an eye wash station.

Fifty percent of the building's exterior walls are constructed from chain-link fence (secondary containment). The chain-link walls include a sliding panel system allowing for fully enclosing the building for heat retention during periods of cold weather. The building is heated with forced air electric heaters.

The compound includes a designated area for donning, doffing and storing PPE (see PPE protocol).

Komodo dragons are housed within this same building but their holding and service area are separated from primate areas including a separate entrance and an impermeable wall isolating the 2 areas. This space also has a separate heat source.

Exhibit:

This is an irregular shaped naturalistic Asian themed exhibit. At its widest and highest points it is 85'L x 40'W x 25'H (approximately 3200 sq. ') (See Addendum H – Holding and Exhibit drawings).

Animal containment consists of a combination of concrete gunite walls, invis-a-mesh and glass viewing windows. The public is separated from the animals with the concrete gunite and glass viewing windows. All invis-a-mesh is a minimum of 6' away from guest areas. Vertical sections of mesh are angled away from guest areas for sanitary reasons.

The animal space includes a wide variety of naturalistic climbing structures, including artificial rock

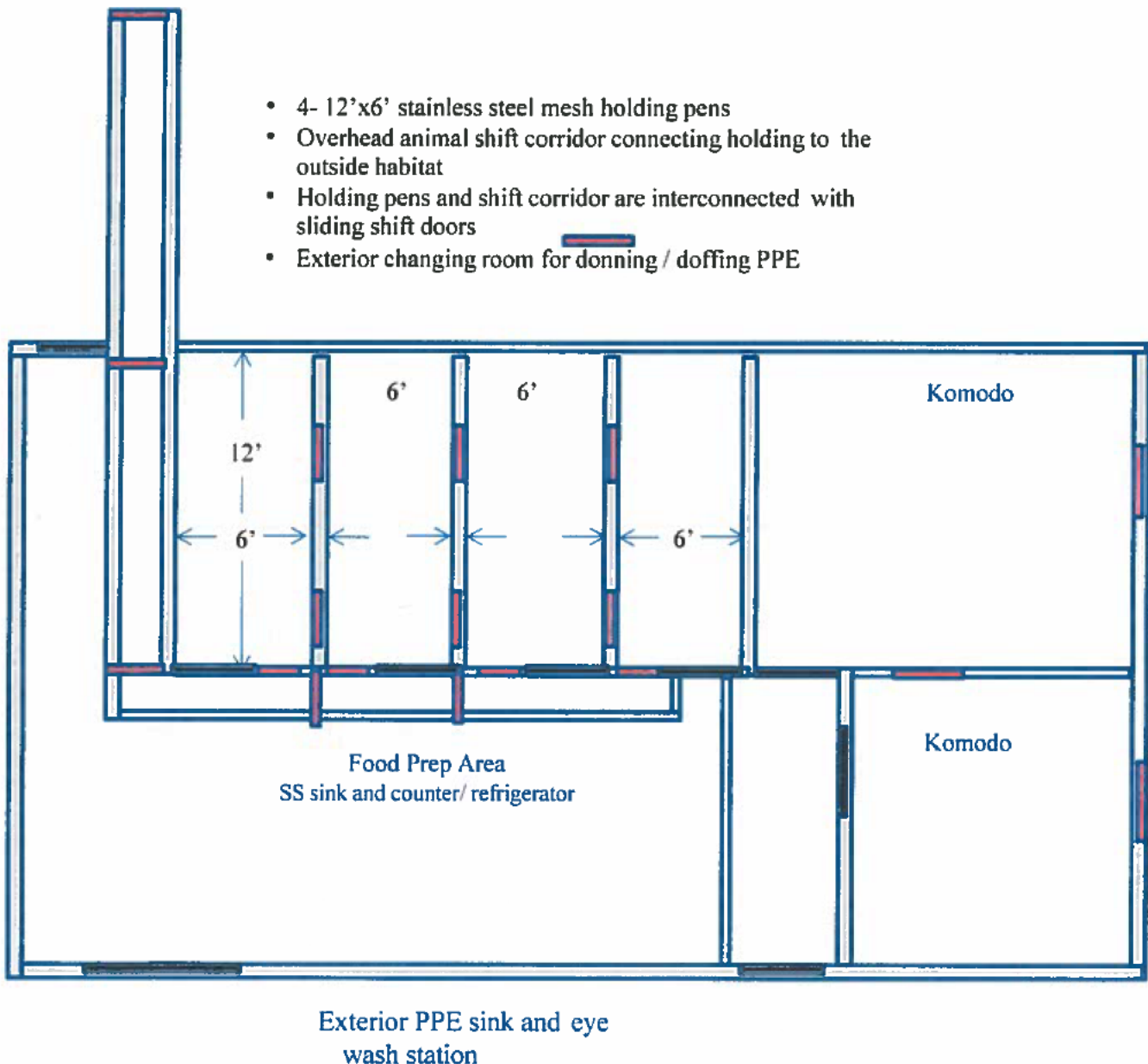
structures, living trees, natural and artificial standing dead fall and themed Asian architectural ruins. Tie-off rings are mounted throughout the habitat for securing interchangeable climbing structures and enrichment devices. The climate is controlled via natural foliage for shade, several fans directed in towards the animals areas and heated perching shelves.

The public view the exhibit through 2 - 25'W x 10'H sheltered glass viewing areas. The viewing area includes solid 10" sq. access doors that open to a mesh barrier. These panels are used by keeper for delivering food reinforcement to the monkeys during keeper talks and husbandry behavior demonstrations.

Indoor Holding diagram

↑
Exhibit

- 4- 12'x6' stainless steel mesh holding pens
- Overhead animal shift corridor connecting holding to the outside habitat
- Holding pens and shift corridor are interconnected with sliding shift doors
- Exterior changing room for donning / doffing PPE



- b. **A 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.**

The technical expertise of the management staff responsible for management, care and maintenance of the primate collection at Disney's Animal Kingdom have more than 65 years of combined experience working with primates. The management staff consists of the Animal Operations Director, the Animal Operations Manager (curator) and four (4) Zoological Managers. The management staff has experience with facility design as well as the day-to-day husbandry practices including successful breeding and rearing. In addition, the keeper staff for the primate carnivore team and our veterinarians have over 175 combined years of primate experience. (Please see Addendum E – Management Staff's curricula vitae).

- c. **The number of years each species has been maintained at the facility;**

Disney's Animal Kingdom has maintained primates in the collection since 1996. Below is a list of primates and the number of years each species has been maintained at the facility:

Species	Number of years maintained at facility
Mona Monkey	3
Mandrill	17
Black-and-white (Angolan) Colobus	7
Eastern Black-and-white Colobus	12
White-checked Gibbon	17
Siamang	17
Western Gorilla	18

- d. **The number of births by year for each species for the last 5 years; and**

Species	Number of births
Mandrill	2 (in 2011)
Angolan Colobus	1 (in 2011) and 1 (in 2013)
White-cheeked Gibbon	1 (in 2013)
Siamang	2 (in 2011)
Western Gorilla	2 (in 2014)

- e. **Mortalities at the facility with these or similar species in the last 5 years, causes of such mortalities, and steps taken to avoid or decrease such mortalities.**

The following are the mortalities at the facility with this or similar species in the last 5 years:

Black-and-white (Angolan) Colobus

During the past 5 years we have had 2 Black-and-white (Angolan) Colobus deaths. One was stillborn. In this pregnancy the fetus was too large to pass through the birth canal. With input and discussion with our Nutritionist, we changed the diet. In addition the adult females were trained for an awake ultrasound monitoring to determine if the fetuses were in the correct position as well as measuring the size of the fetuses. Also breeding males were switched as one thought was that the reason that we were having large infants was due to a genetic predisposition from the male. The other death was also an infant (4 days of age). This infant died from head trauma. Ultimately the decision was made to contracept this female and not allow them to breed.

Mandrill

During the past 5 years, we have had 2.2 Mandrill deaths.

Two males (one was 28 years old and the other was 22 years old) and two females (one was 31 years old and the other was 32 years old) – All of these animals were well past the median life expectancy of 19.1 years of age and the 28 year old male was the oldest living male mandrill in the AZA population at the time of his death. All four mandrills were euthanized due to age-related conditions (28 year old male – severe vertebral spondylosis with limited mobility, 22 year old male – kidney infection and meningitis, 31 year old female – chronic arthritis, multiorgan disease and 32 year old female – mammary cancer and severe vertebral fusion).

H. IMPORTS, EXPORTS, OR RE-EXPORTS.

- 10. For shipment of LIVE specimens, the transport conditions for animals 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:**
- i. The type, size, and construction of any shipping container; and**

These Lion-tailed Macaques will be shipped in an individual crate that meets the IATA requirements (Container Requirement 31).

- ii. The arrangements for watering or otherwise caring for the wildlife during transport.**

The Lion-tailed Macaque will be transported from Cologne Zoo in Germany on a commercial flight. A staff member from Disney's Animal Kingdom staff will be on the same flight with the lion-tailed macaques to ensure the appropriate care during the transport. Our goal is to ship directly to Miami, Florida.

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

This import permit application is not for the import of a marine mammal species but instead is for the import of three (3) female Lion-tailed Macaque.

- 12. 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).**

This import is part of the concerted effort to increase the diversity of captive Lion-tailed Macaques in the AZA population. These female will be part of a captive breeding program here at Disney's Animal Kingdom. As previously stated the disposition of any progeny will be under the directive of the Lion-tailed Macaque SSP and the Old World Monkey TAG. In addition, these Lion-tailed Macaques have been certified as bred in captivity per the attached email; therefore, no CITES import permit is required (See Addendum I – Email from Cologne Curator).

- 13. For export of CITES Appendix-I 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.**

This permit application is not for the export of a CITES Appendix-I species but instead is for the import of three (3) female Lion-tailed Macaques.

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

- a. A copy of the canceled CITES export or re-export document issued by the appropriate CITES office in the country from which the wildlife was imported (if applicable); and**

This permit application is not for the re-export but instead is for the import of three (3) female Lion-tailed

Macaques.

- b. **A cleared copy of Form 3-177, wildlife Declaration for Import (hard copy or electronic release); or**

This permit application is not for the re-export but instead is for the import of three (3) female Lion-tailed Macaques.

- c. **If you did not make the original import, provide a copy of the importer's documents outlined above and the invoice or other documentation that shows you acquired the wildlife from the original importer or history of transactions which demonstrate chain of ownership.**

This permit application is not for the re-export but instead is for the import of three (3) female Lion-tailed Macaques.

15. **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).**

Disney's Animal Kingdom would like to request Miami, Florida as the port of entry. The Lion-tailed Macaques will be shipped from Cologne Zoo in Cologne, Germany. We are planning to ship the Lion-tailed Macaques on a commercial airline from Germany directly to Miami, Florida. This will allow us to minimize the number of stops within the United States and expedite the unloading of Lion-tailed Macaques into an appropriate quarantine enclosure here at Disney's Animal Kingdom.

16. **Name and address where you wish permit mailed, if different from page 1 (All permits will be mailed via the U.S. Postal Service, unless you identify an alternative means below):**

We would like the permit returned to us via Fed Ex and not U. S. Postal Service. A pre-paid envelope and air bill have been included with this permit application.

17. **If you wish the permit to be delivered by means other than USPS regular mail, provide an air bill, pre-paid envelope, or billing information. If you do not have a pre-paid envelope or air bill and wish to pay for a courier service with your credit card, please check the box below. Please DO NOT include credit card number or other information; you will be contacted for this information.**

If a permit is issued, please send it via a courier service to the address on page 1 or question 11. I understand that you will contact me for my credit card information once the application has been processed.

We would like the permit returned to us via Fed Ex. A pre-paid envelope and air bill have been included with this permit application.

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

Lynn McDuffie
407-939-6237 (office)
[REDACTED] (cell)
Lynn.McDuffie@disney.com

19. **Disqualification Factor. A conviction, or entry of 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 disqualifies any such person from receiving or exercising the privileges of a permit, unless such disqualification has been expressly waived by the Service Director in response to a written petition. (50 CFR 13.21(c)) Have you or any of the owners of the business, if applying as a business, been convicted, or entered a plea of guilty or nolo contendere, forfeited collateral, or are currently under charges for any violations of the laws mentioned above?**

Yes No If you answered "Yes" 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.

Addendum A

ZIMS Specimen Report

Specimen Report



ISIS GAN MIG12-29426077 3403
Macaca silenus Bartaffe
Order Primates **Family** Cercopithecidae
Start Date Jan 01, 1800 **End Date** Apr 23, 2015

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Basic Animal Information

Sex - Contraception	Female -	Status	Alive
Birthdate - Age	Nov 14, 2005 - 9Y,5M,9D	Preferred ID	3403
Origin	Cologne Zoo	Rearing	Parent
Birth Type	Captive Born	Hybrid Status	Not a hybrid
Sire	MIG12-29452766	Dam	19672892
Current Collection	Main Institution Animal Collection	Collection Trip	
Clutch / Litter		Enclosure	KOLN

Physical Visit History

Reported By	Date	Source / ID	Holder / ID	Term Type	Recipient / ID
KOLN	Nov 14, 2005		KOLN / 3403	Birth/Hatch (Physical and Ownership)	

Ownership Visit History

See Physical Visit History

Identifiers

Reported By	Date	Type	Identifier	Location	Comments
KOLN	Dec 22, 2010	Regional Studbook Number	EAZA/3176		Legacy SLocation: EAZA Legacy Comment:
KOLN	Jun 23, 2009	Transponder	968000005121039		
KOLN	Dec 03, 2007	House Name	Dorothee		
KOLN	Aug 10, 2006	Intl Sdbk#	3176		
KOLN	Nov 14, 2005	Local ID	3403		

Permits

Name	Authority	Assigned	Details
DE-K-11061600333	CITES - Convention on Intl Trade in Endangered Species	Jul 26, 2011	

Sex Information

Reported By	Date	Sex	Comments
KOLN	Nov 14, 2005	Female	

Parent Info

In ZIMS	Parent Info	Type / Probability	Birth Date	Reported By
True	19672892 (KOLN / 2984)	Dam/100%	Dec 26, 1997	KOLN
True	MIG12-29452766 (KOLN / 3000)	Sire/100%	Feb 12, 1994	KOLN

Ancestry Information (calculated by ISIS from shared data)

% Pedigree Known	% Pedigree Certain	Taxonomic Inconsistencies	No. Identified Ancestors
0.00%	0.0000	No	24

Specimen Report



ISIS GAN MIG12-29426076 3596
 Macaca silenus Bartaffe
 Order Primates Family Cercopithecidae
 Start Date Jan 01, 1800 End Date Apr 23, 2015

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Basic Animal Information

Sex - Contraception	Female -	Status	Alive
Birthdate - Age	Dec 30, 2006 - 8Y,3M,24D	Preferred ID	3596
Origin	Cologne Zoo	Rearing	Parent
Birth Type	Captive Born	Hybrid Status	Not a hybrid
Sire	MIG12-29452766	Dam	19672892
Current Collection	Main Institution Animal Collection	Collection Trip	
Clutch / Litter		Enclosure	KOLN

Physical Visit History

Reported By	Date	Source / ID	Holder / ID	Term Type	Recipient / ID
KOLN	Dec 30, 2006		KOLN / 3596	Birth/Hatch (Physical and Ownership)	

Ownership Visit History

See Physical Visit History

Identifiers

Reported By	Date	Type	Identifier	Location	Comments
KOLN	Dec 22, 2010	Regional Studbook Number	EAZA/3206		Legacy SLocation: EAZA Legacy Comment:
KOLN	Jun 24, 2009	Transponder	968000005139953		
KOLN	Dec 03, 2007	Intl Stdbk#	3206		
KOLN	Dec 03, 2007	House Name	Emily		
KOLN	Dec 30, 2006	Local ID	3596		

Permits

Name	Authority	Assigned	Details
DE-K-11061600332	CITES - Convention on Intl Trade in Endangered Species	Jul 26, 2011	

Sex Information

Reported By	Date	Sex	Comments
KOLN	Dec 30, 2006	Female	

Parent Info

In ZIMS	Parent Info	Type / Probability	Birth Date	Reported By
True	19672892 [KOLN / 2984]	Dam/100%	Dec 26, 1997	KOLN
True	MIG12-29452766 [KOLN / 3000]	Sire/100%	Feb 12, 1994	KOLN

Ancestry Information (calculated by ISIS from shared data)

% Pedigree Known	% Pedigree Certain	Taxonomic Inconsistencies	No. Identified Ancestors
0.00%	0.0000	No	24

Specimen Report



ISIS GAN MIG12-29426074 3848
Macaca silenus Bartaffe
Order Primates **Family** Cercopithecidae
Start Date Jan 01, 1800 **End Date** Apr 23, 2015

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Basic Animal Information

Sex - Contraception	Female -	Status	Alive
Birthdate - Age	Dec 26, 2008 - 6Y,3M,28D	Preferred ID	3848
Origin	Cologne Zoo	Rearing	Parent
Birth Type	Captive Born	Hybrid Status	Not a hybrid
Sire	MIG12-29452766	Dam	19672892
Current Collection	Main Institution Animal Collection	Collection Trip	
Clutch / Litter		Enclosure	KOLN

Physical Visit History

Reported By	Date	Source / ID	Holder / ID	Term Type	Recipient / ID
KOLN	Dec 26, 2008		KOLN / 3848	Birth/Hatch (Physical and Ownership)	

Ownership Visit History

See Physical Visit History

Identifiers

Reported By	Date	Type	Identifier	Location	Comments
KOLN	Jun 23, 2009	Transponder	95800000514654 0		
KOLN	Jun 23, 2009	House Name	Kurzschwanz		
KOLN	Jan 01, 2009	Intl Stdbk#	3403		
KOLN	Dec 26, 2008	Local ID	3848		

Permits

Name	Authority	Assigned	Details
DE-K-11061600330	CITES - Convention on Intl Trade in Endangered Species	Jul 26, 2011	

Sex Information

Reported By	Date	Sex	Comments
KOLN	Dec 26, 2008	Female	

Parent Info

In ZIMS	Parent Info	Type / Probability	Birth Date	Reported By
True	19672892 [KOLN / 2984]	Dam/100%	Dec 26, 1997	KOLN
True	MIG12-29452766 [KOLN / 3000]	Sire/100%	Feb 12, 1994	KOLN

Ancestry Information (calculated by ISIS from shared data)

% Pedigree Known	% Pedigree Certain	Taxonomic Inconsistencies	No. Identified Ancestors
0.00%	0.0000	No	24

Addendum B

Lion-tailed Macaque Age Pyramid and Population Overview

Figure 1: Lion-tailed Macaque Age Pyramid and Population Overview

This figure illustrates the age pyramid and population overview of the Lion-tailed Macaque. The pyramid shows the distribution of individuals across different age groups, with the largest number of individuals in the 10-20 age group. The population overview shows the total number of individuals in each age group, with the highest population in the 10-20 age group.

Age Distribution

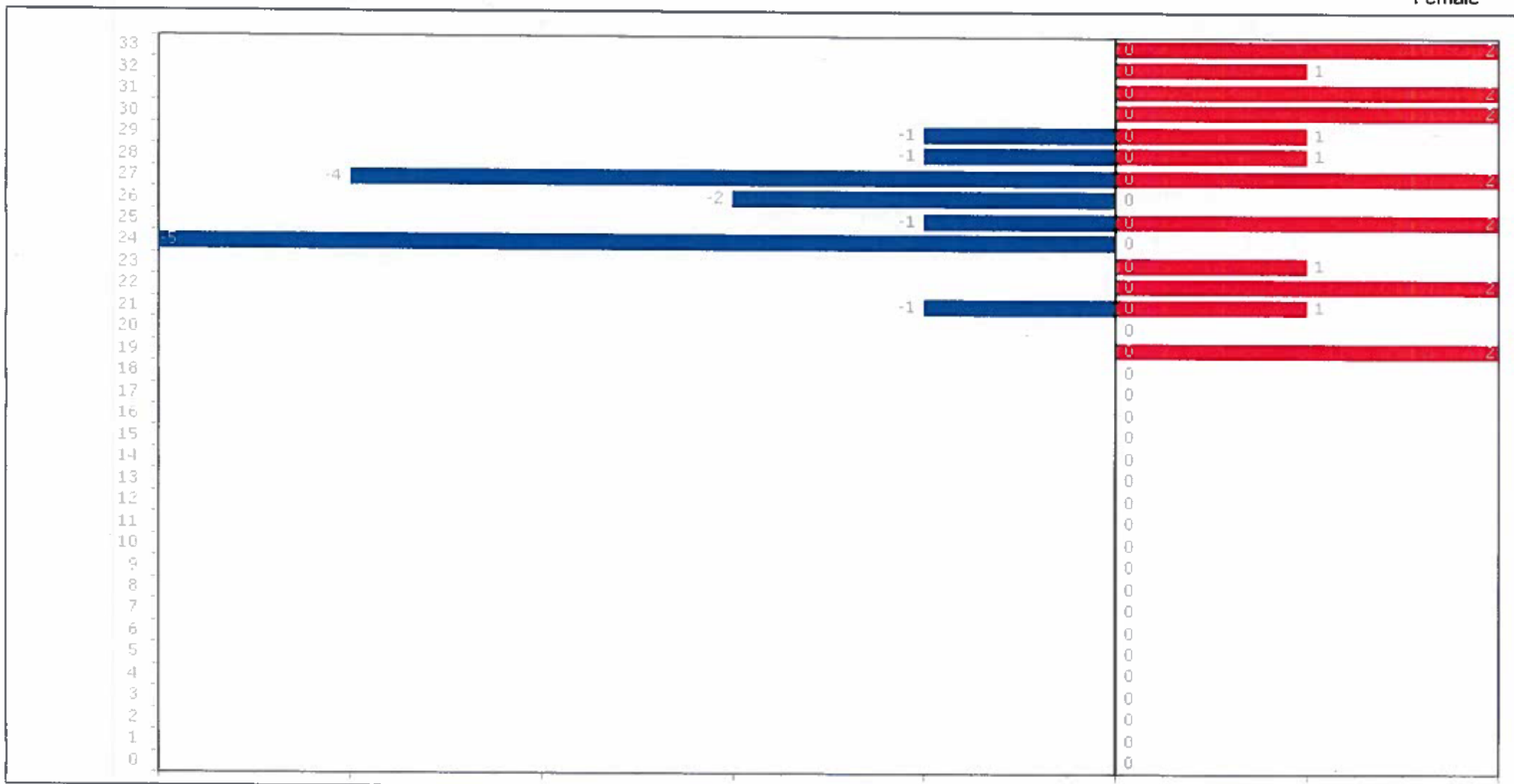
Macaca silenus/Lion-tailed macaque

© 2015 International Species Information System



Male

Female



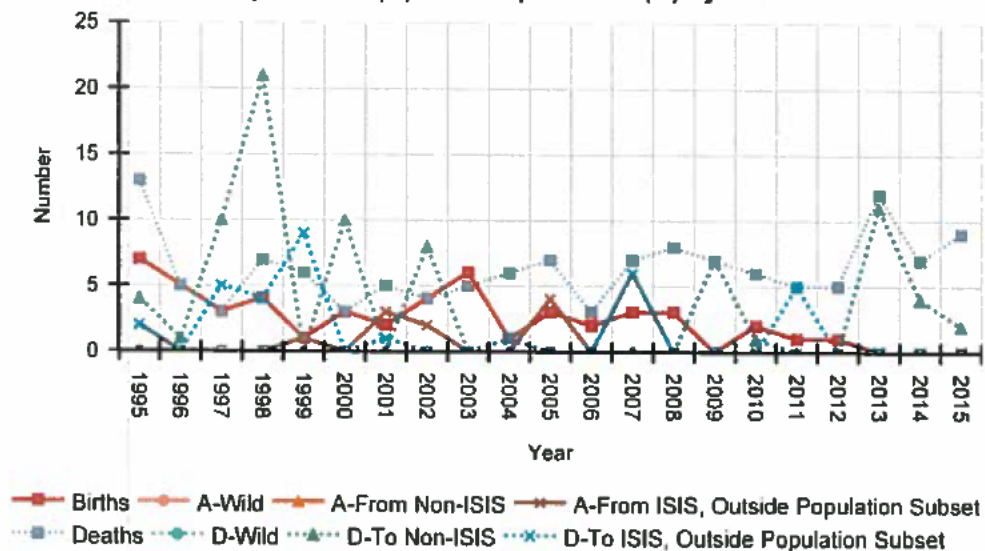
Include Taxonomy below selected level: True
 Global Scope: True
 Number of Animals of Unknown Age Excluded: 0

Population Overview Report

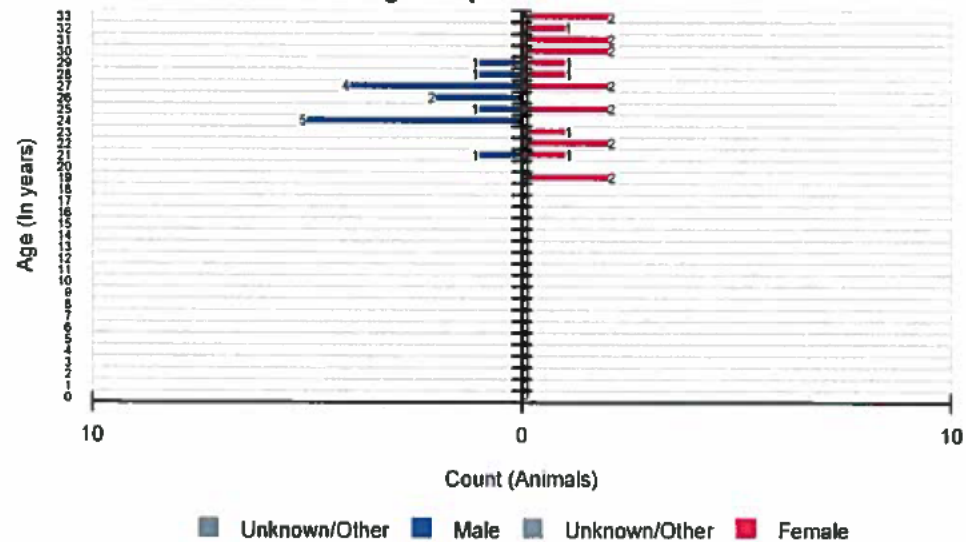
for *Macaca silenus* / Lion-tailed macaque IUCN: Endangered (EN), CITES: I
 From: 24 Oct 1995 - 24 Oct 2015 | Population Subset: 182 ISIS Members From AZA



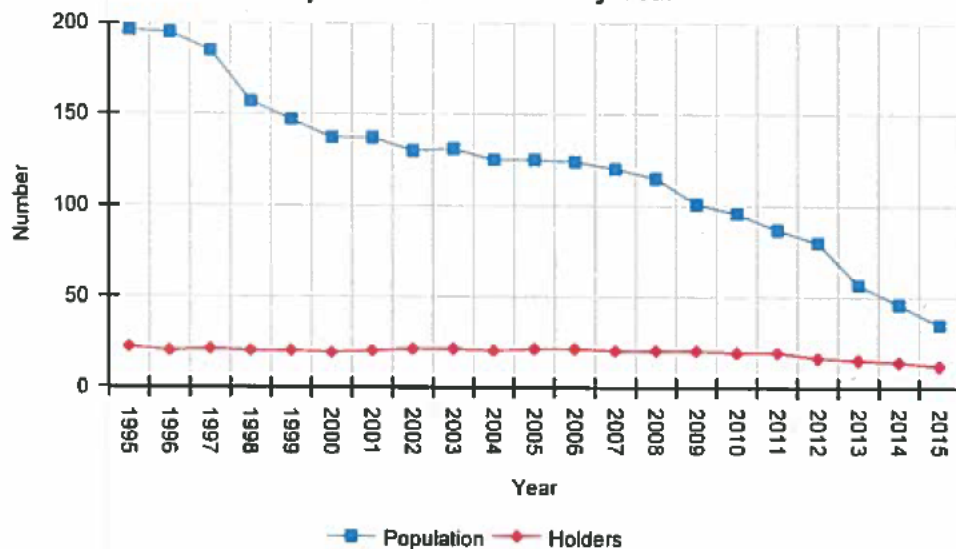
Acquisitions (A) and Dispositions (D) by Year



Animal Age Graph / Live Animals



Population and Holders by Year



Population Data and Data Quality Indicators

Individuals	
Living Individuals	
Contributing Founders	(>=) 13.8.0 = 21 total
Living Individuals	15.20.0 = 35 total
Living Descendants (from Founders)	(>=)4.3.1 = 8 total
Living Breeders	0.11.0 = 11 total
Living Captive Born	15.20.0 = 35 total
Living Wild Born	0.0.0 = 0 total
% Marked Hybrid	0% (0 of 0 total)
% Ancestry Includes Inconsistent Taxonomy	0% (0 of 0 total)
% Pedigree Known	23.93% (Avg - 35 Animals)
% Pedigree Certain	23.93% (Avg - 35 Animals)
Living and Historical Individuals	
% Estimated Birth Dates (> One Month)	2% (1 of 45 total)
% Unknown Date of Birth	0% (0 of 0 total)
% Individually Identified Sires and Dams	91% (41 of 45 total - excludes Founders)
% Individuals with Multiple Sires or Dams	4% (2 of 45 total - excludes Founders)
% MULT Parents without Identification	0% (0 of 0 total - excludes Founders)
% Animals without Recorded Birth or Capture	-11% (-5 of 45 total)
% Animals Lost to Follow Up	7% (3 of 45 total)
Groups	
Living Animals in Groups	0.0.0 = 0 total
Current Founder Groups	0
Number of Current Groups	0
% Pedigree Known	0% (Avg - 0 groups)
% Pedigree Certain	0% (Avg - 0 groups)

Disclaimer: These tables and figures are based on institutional data submitted to ISIS, not studbook data.

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Addendum C

Support Letter from Lion-tailed
Macaque SSP Coordinator



Saint Louis Zoo

Animals Always®

27 October, 2015

US Fish and Wildlife Service
Division of Management Authority
4401 North Fairfax Drive
Arlington, Virginia 22203

This letter is on behalf of the Association of Zoos and Aquariums (AZA) Lion-tailed Macaque Species Survival Plan (SSP) in support of the importation of three female Lion-tailed Macaques (*Macaca silenus*) from the Cologne Zoological Garden, Germany into the United States.

The Lion-Tailed Macaque SSP recommends the transfer of three female Lion-tailed Macaques (ISIS GAN: MIG12-29426074, MIG12-29426077, MIG12-29426076) from Cologne Zoological Garden, Germany to Disney's Animal Kingdom, Lake Buena Vista Florida, United States. The Cologne Zoo Lion-tailed Macaques represent a genetic lineage that is not present in other AZA institutions and the integration of these individuals into a breeding group is important to improving genetic diversity and ensuring long term management of the captive assurance population of this species. The next youngest female in the AZA population is 18 years old and the addition of these young females will enhance the AZA breeding population.

A long-term, viable captive population is an integral part of zoological educational programming and provides the impetus for institutional commitment to the species. This commitment leads to the financial support of in-situ projects. This relationship will ultimately result in more knowledge of the species and better management of wild populations.

Sincerely,

Joe Knobbe
Lion-Tailed Macaque SSP coordinator
Chair, Old World Monkey Taxon Advisory Group

Addendum D

Lion-tailed Macaque Species Profile

Lion-tailed Macaque

Macaca silenus

Location at Walt Disney World:

Disney's Animal Kingdom, Asia, Maharajah Jungle Trek



Photo credit: Arkive.org

Size:

- 2 ft (61 cm) body length,
- 1.5 ft (46 cm) tail length

Weight:

- 15 to 33 lbs (6.8-15 kg), males slightly larger than females

Life Expectancy in the wild:

- 20 – 30 years

Median Life Expectancy in Association of Zoos and Aquariums (AZA) zoos:

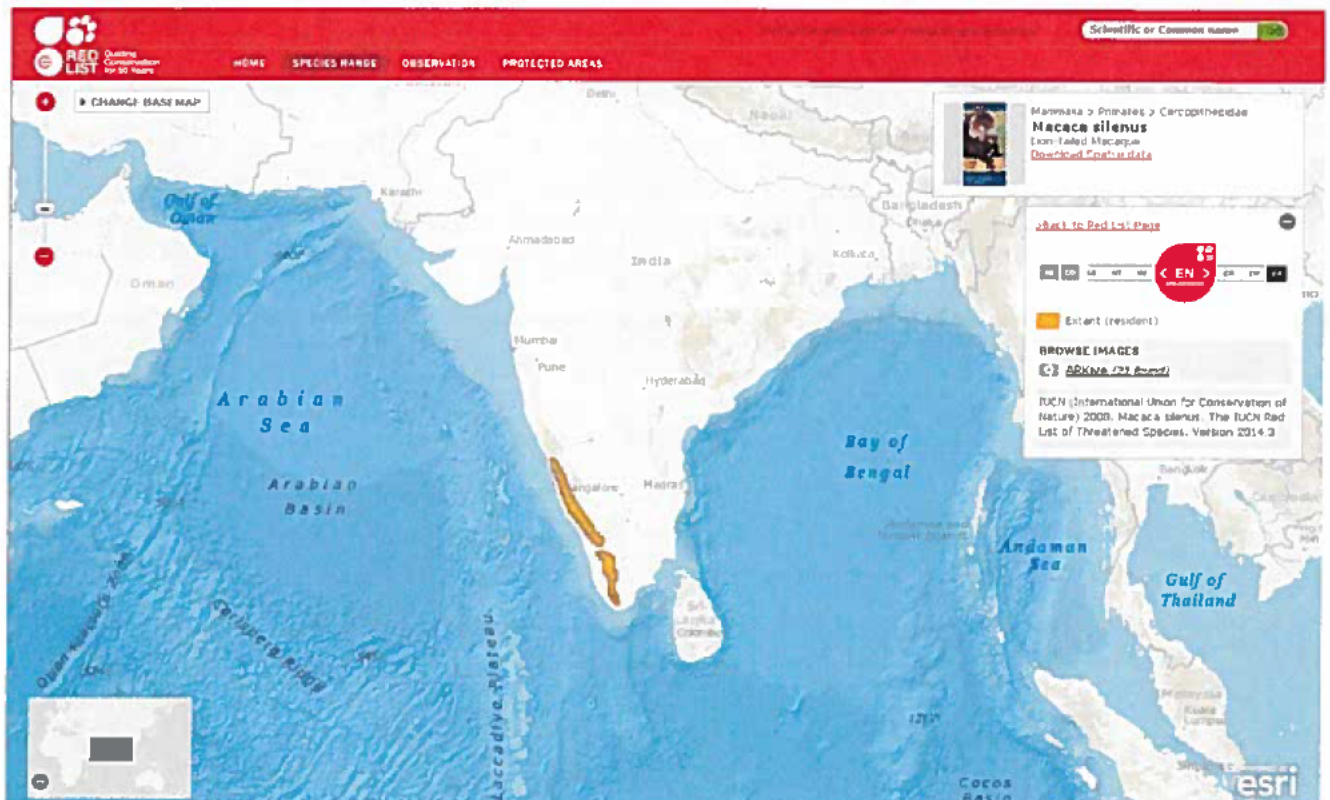
- 25 years

Habitat:

Lion-tailed macaques reside in the upper canopy of tropical evergreen rainforest between 100 to 1,800 meters in elevation. They live in monsoon forest in hilly country, and sometimes in disturbed forests and human-planted orchards.

Geographic range

Southwest India, primarily in the Western Ghats Mountains



The lion-tailed macaque is one of the smallest and rarest macaque species in the world. It is also the only macaque listed as endangered, mainly due to loss of habitat. Thankfully, many parts of the remaining habitat are considered sacred forests, or sholas, by the local native people who protect them. You can protect habitat too by recycling paper and by looking for forest-friendly products like shade-grown coffee or things made out of bamboo instead of traditional wood.

Description:

The lion-tailed macaque is a small, mostly black arboreal primate with a bushy, silvery mane and black forehead. The arching tail ends in a small tuft reminiscent of a lion's tufted tail, hence the species name. Males have large canine teeth.

Diet:

In the wild: Lion-tailed macaques are mainly frugivorous feeding on fruits such as mangos, elephant apples, jack fruit, and figs and will munch on any accompanying seeds, buds, and leaves. They will also eat insects, small birds, amphibians, reptiles, and mammals if they are able to catch them.

At Disney's Animal Kingdom:

Animal diets are prepared by nutritionists who use a variety of resources to ensure that each animal receives an appropriate and nutritionally balanced diet (with the right amount of protein, fat, fiber, vitamins, minerals, and other nutrients). Diets for each species are prepared based on available information on the digestive system structure, the diets of wild populations, and the diets of similar species. Diets can be further changed to meet an animal's needs, for example, if the individual is growing, pregnant, or geriatric.

Physical Adaptations:

- **Cheek pouches:** Individuals store food in cheek pouches while browsing and will consume the food later by using the backs of their hands to push it out from the storage compartment. The macaque's cheeks, when filled to capacity, can hold as much food as the individual's stomach. This pouch is especially helpful to the macaque as it allows them to limit the time they spend on the ground foraging and vulnerable to predators.
- **Tail:** Unlike many other arboreal primates, the macaque's tufted tail is used for balance rather than for grabbing hold of branches. It is not prehensile.
- **Ischial callosities:** Thick callus pads on their rear enables macaques to sit down in an upright without pain or to sleep hunched in forked branches.

Behavioral Adaptations:

- **Activity:** The lion-tailed macaque is predominantly an arboreal primate found in the upper canopy of the trees, but occasionally it can be found foraging on the ground. This species is diurnal and active during the day. At night they sleep high up in the canopy to avoid predators such as large snakes and carnivores.
- **Group living:** Macaques are generally found in groups of 4 to 30 individuals. Groups usually consist of a single adult male who leads the group, several adult females, and their offspring, but occasionally up to 3 adult males can be found in one group.
- **Territorial:** Lion-tailed macaques are the only species of macaque in which the males use vocalizations to claim their territory. The home range of this species is about 0.5 square miles (0.87 square km).
- **Communication:** This species uses a variety of methods to communicate including 17 different vocalizations and also more subtle means such as lip position, gaze direction, gestures, and touch.
- **Social grooming:** Social grooming is an important social interaction that helps define the social structure of the troop. In this society, the higher ranked you are, the less grooming you give and the more you receive.

Reproduction:

Female lion-tailed macaques mature around 5-6 years old while males mature slightly later at 8 years. When ready to breed, females advertise to males by courtship calls and displaying small swellings under their tails.

Females give birth roughly every 2-3 years to a single offspring and usually time birth, after a gestation period of 5.5 months, to coincide with seasonal fruit maturation. Newborn infants weigh less than a pound and are carried by the female on her abdomen. The infant will nurse for up to a year and be cared for meticulously by the mother during that time. Developing the skills to become successful takes an extended period of learning occurs before the macaques are independent.

Once training is complete, males generally leave the troop to form a new troop or join together in a bachelor group. Females do not disperse, but instead stay with their family troop.

Training and Enrichment:

Animal training and animal enrichment are integral processes included in successful animal care programs to ensure quality care and welfare. Animal training is simply teaching behaviors to the animals to encourage efficient and safe cooperation in their own care, keep them physically fit and mentally stimulated, and share their unique behaviors with guests. Animal enrichment includes providing a variety of stimuli to an animals' environment with similar goals to increase physical activity, stimulate problem solving, offer choices, and promote natural behaviors.

Veterinary Care:

Exceptional veterinary care is a top priority at Disney's Animal Kingdom Theme Park. This includes preventive health exams, around the clock coverage, treatment of sick and injured animals, and the collection of extensive medical data.

Conservation Status and Threats:

Currently, the International Union for Conservation of Nature and Natural Resources (IUCN) lists the lion-tailed macaque as endangered due to small population size and significant projected population decline and habitat loss.

The main threat to lion-tailed macaques is habitat fragmentation, degradation, and loss. Much of this is due to extensive timber harvest and clear-cutting for tea, eucalyptus, coffee, and teak plantations. It is estimated that only 1% of the macaque's original habitat remains today. Thankfully, many parts of the remaining lion-tailed macaque habitat are considered sacred by the local native people who call these areas of forests sholas and protect these remaining biodiversity hotspots.

Other threats to this species include hunting pressures from those seeking them as a source of food to those who view them as crop pests. Lion-tailed macaques are collected from the wild

for the illegal pet trade. In addition, these macaques are often mistaken for Nilgiri langurs, which are used in traditional medicines.

How Disney is helping lion-tailed macaques in the wild:

Since its founding in 1995, the Disney Conservation Fund has contributed millions of dollars to support conservation programs in more than 114 countries around the world. Most recently, the Disney Conservation Fund joined forces with DisneyNature to make a donation to Conservation International to help protect macaques and other endangered species and their habitat in Southeast Asia, in conjunction with the DisneyNature movie, *Monkey Kingdom*.

The Disney Conservation Fund has provided funding to the following projects to help protect habitat in India:

Macaques in Kudremukah National Park

In 2014, the Disney Conservation Fund supported the India Program Centre for Wildlife Studies to assess lion-tailed macaques in Kudremukah National Park. The park and its surrounding landscapes are considered the largest contiguous habitat for lion-tailed macaques. The project helped train youth living in local communities to monitor and map monkey groups and identify threats faced by the species to develop a list of possible interventions.

Conserving India's Lion-Tailed Macaques

The Disney Conservation Fund partnered with the Wildlife Conservation Society in 2015 to map lion-tailed macaque populations in the rainforests of Western Ghats, India. The project will enable researchers to identify threats to the species and implement conservation actions, including rural education programs on macaque ecology and conservation.

King Cobra Conservation in India

Working with the University of Arizona in 2009, the Disney Conservation Fund provided \$19,700 in support to develop and implement a state-of-the-art educational program that engages local communities and students in the conservation of king cobras and their habitat. In addition, the project developed and implemented a conservation plan in partnership with decision makers with support of the local community.

Hornbill Conservation Program

This Wildlife Conservation Society initiative, supported from 2005 to 2008 and totaling \$75,000, worked with indigenous communities to ensure the conservation of globally significant forests. These forests are home to a wide variety of animals including the flagship species hornbills. This program encouraged community participation in conservation through integrated activities that foster wildlife conservation through community welfare.

Tiger and Prey Study in India's Tropical Dry Forests

In 2000, DWCF provided \$20,000 in support to the National Fish and Wildlife Foundation to formulate conservation strategies for improved management of tigers and their prey in the dry forests of India.

To learn more about the Disney Worldwide Conservation Fund, visit www.disney.com/conservation

How you can help lion-tailed macaque:

One of the biggest threats to lion-tailed macaques is habitat loss. Just like lion-tailed macaques, the animals found near you may be facing habitat loss. You can help animals in your area by planting native trees, shrubs, and flowers as food sources and nesting sites for wildlife. You could even tailor your plant selections to attract butterflies, hummingbirds and other birds, or all of the above.

Primates like the lion-tailed macaque are often collected for sale as pets, but these animals do not make good pets and require a lot of specialized care. For species like macaques and other types of primates, they will need all hands on deck to help sustain the population. Before you get a pet, research it to learn where it came from and what kind of care it will need. If you decide to get an exotic animal, always insist on full documentation to ensure you are not getting an illegally caught wild animal.

Be sure to visit your local zoo and explore many of the cool species that share our planet with us. The admission fee you pay to enter the zoo will help support the preservation of many species in the wild.

Sources:

1. IUCN species profile page: <http://www.iucnredlist.org/details/12559/0>
2. National Zoo: <http://nationalzoo.si.edu/Animals/AsiaTrail/lionmacaque.cfm>
3. Arkive: <http://www.arkive.org/lion-tailed-macaque/macaca-silenus/>
4. Smithsonian Magazine: <http://www.smithsonianmag.com/science-nature/these-intense-photos-lion-tailed-macaques-will-turn-you-conservationist-180953401/?no-ist>
5. Encyclopedia of Life: <http://eol.org/pages/323957/overview>
6. Animal Diversity: http://animaldiversity.ummz.umich.edu/accounts/Macaca_silenus/
7. AZA survival stats: www.aza.org/survival-stats
8. Woodland Park Zoo: <http://www.zoo.org/page.aspx?pid=1886>
9. Toronto zoo: <http://www.torontozoo.com/ExploretheZoo/AnimalDetails.asp?pg=382>

Addendum E

Management Staff's curricula vitae

Curriculum Vita
TAMARA [REDACTED] BETTINGER
October 2015

HOME ADDRESS:

[REDACTED]

WORK ADDRESS:

Tammie Bettinger, Animal Operations Director
Disney's Animal Kingdom
P.O. Box 10,000
Lake Buena Vista, FL 32830
Phone: (407) 938-2847
Cell: [REDACTED]
Email: Tammie.Bettinger@Disney.com

EDUCATION:

[REDACTED] B.S. Biology University of [REDACTED]
[REDACTED] M.S. Zoology [REDACTED] State University,
[REDACTED] Ph.D. Zoology [REDACTED] State University, [REDACTED]

WORK EXPERIENCE:

[REDACTED] Animal Operations Director, Disney's Animal Kingdom
[REDACTED] Sr. Research Biologist, Disney's Animal Kingdom
[REDACTED] Associate General Curator, Zoo [REDACTED]
[REDACTED] Curator of Conservation and Research, [REDACTED] Zoo
[REDACTED] Science Curator, [REDACTED] Zoo
[REDACTED] Financial Accountant, Public Service Company of [REDACTED]

RELATED WORK EXPERIENCE:

Teaching experience:

[REDACTED] *Zoo and Aquarium Biology and Management.* University of Central [REDACTED]
[REDACTED] *Human Anatomy and Physiology.* [REDACTED] Community College
[REDACTED] *Zoo Biology and Management.* Senior/graduate level course, [REDACTED] State University
[REDACTED] *Conservation Biology.* Senior/graduate level course, [REDACTED] State University
[REDACTED] *Field Experience in Tropical Ecology.* Senior/graduate level course, [REDACTED] State University
(One-month field course in Venezuela)

PROFESSIONAL ACTIVITIES:

AZA Committees:

[REDACTED] Chair, Research and Technology Committee
[REDACTED] AZA Animal Welfare Committee
[REDACTED] Co-coordinator of the AZA Course on Developing Institutional Strategies for Conservation (DIISC)
[REDACTED] Chimpanzee SSP Management Group, Vice-chair [REDACTED]
[REDACTED] Sanctuary and Research Advisor, Chimpanzee SSP
[REDACTED] Prosimian TAG (VC for [REDACTED])

NON-AZA Committees:

[REDACTED] Chair, BOD – Pan African Sanctuary Alliance

Board of Director – Pan African Sanctuary Alliance
Board of Directors, Chimp Haven; Advisory Board
Chair, Scientific Program Committee, International Primatological Society
Conservation Committee, American Society of Primatologists
Education Committee, International Primatological Society
Program Committee, American Society of Primatologists; Program Chair

PUBLICATIONS:

- Bettinger T, Wallis J, Carter T. 1994. Spatial selection in captive adult female chimpanzees. *Zoo Biol* 13:167-176.
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- Laudenslager M, Bettinger T, Sackett G. 2006. Saliva as a medium for assessing cortisol and other compounds in nonhuman primates: collection, assay, and examples. In: Sacket G, Ruppenthal G, Elias K, editors. *Nursery rearing of nonhuman primates in the 21ST century*. New York (NY): Springer Publisher. p. 403-427.
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Jay Therien

Experience

Disney's Animal Kingdom Lake Buena Vista, FL

Animal Operations Manager

- ◆ Oversea mixed taxa collection including, tigers, meerkat, Burmese black mountain tortoise, Malayan flying fox, Rodrigues flying fox, lowland gorilla, white-cheeked gibbon, siamang, mandrill and Angolan colobus.
- ◆ Supervise a team of 4 Zoological Managers, including staff development, performance feedback, and implementation of team goals and oversight of 23 full time keepers.
- ◆ Responsible for the Primate-Carnivore teams operational budget.
- ◆ Coordinated all facilities improvement and construction projects for the animal areas under my oversight.
- ◆ Representing Animal Programs in the park enhancement in development process, ensuring optimal animal welfare, cast safety and guest experience.
- ◆ Contribute to the development and implementation of policy and global operating guidelines for Disney's Animal Programs.
- ◆ Member of the animal programs safety review committee.

Disney's Animal Kingdom Lake Buena Vista, FL

Assistant Animal Operations Manager

- ◆ Oversee a dynamic animal collection including mixed taxa of primates, rodents, pteropids, reptiles, ungulates and invertebrates. Primate species includes; siamang, white-cheeked gibbons, mandrill, Angolan colobus and western lowland gorilla.
- ◆ Co supervise a team of 8 Zoological Managers, including staff development, performance feedback, implementation of team goals and oversight of 44 full time keepers.
- ◆ Ensured animal habitats exceed show quality standards.
- ◆ Responsible for Mahagani teams operational budget.
- ◆ Coordinated all facilities improvement and construction projects for the animal areas under my oversight.
- ◆ Serve a liaison between park operations and the animal areas on Pangani Trail and Maharajah Jungle Trek/ Asia animal areas.
- ◆ Served on the Disney's Wildlife Conservation Fund grant review board for Africa.
- ◆ Responsible for non-avian animal transactions pertaining to my areas collections.

Disney's Animal Kingdom Lake Buena Vista, FL

Zoological Manager

- ◆ Member of Disney's Animal Kingdom's opening team.
- ◆ Manage a diverse collection of ungulates, birds, crocodilians, and fish.
- ◆ Member of a 3 manger team that supervises a staff of 19 zookeepers with a strong emphasis on teamwork.
- ◆ Oversee area construction and maintenance projects.
- ◆ Develop and implement standard operating guidelines.
- ◆ Coordinate vet procedures.

██████████ Disney's Animal Kingdom Lake Buena Vista, Fl

Zoo Keeper

- ◆ Member of Disney's Animal Kingdoms pre-opening team.
- ◆ Assisted in the acclimation and introductions of the animals within my work area.
- ◆ Maintained and cared for okapi, black rhino, hippopotamus, several species of African antelope as well as storks, cranes, pelicans and waterfowl.
- ◆ Assisted with veterinary procedures.

██████████ Park Zoo ██████████

Lead Keeper

- ◆ Supervise all aspects of housing, care, transportation and exhibition of animals in zoo collection.
- ◆ Supervised and assigned tasks to all zoo keeping and maintenance staff.
- ◆ Supervised the maintenance of zoo grounds.
- ◆ Maintained and cared for a large variety of taxa including; passerines, felids, ursids, ungulates and primates. Primate species included lion-tailed macaque, Sykes guenon, black and white ruffed lemurs, fat tailed dwarf lemurs and guereza colobus monkeys.
- ◆ Assisted in the development, planning and the construction of new exhibits.
- ◆ Responsible for the enforcement of safety regulations.
- ◆ Maintained inventory of supplies and equipment.

Farm Manager

- ◆ Maintained and cared for a large variety of exotic hoofstock and ratites.
- ◆ Supervised farm staff.
- ◆ Bottle raised neonatal hoofstock when necessary.
- ◆ Logged over 350,000 miles transporting exotic animals within the U. S.
- ◆ Artificially incubated and reared ostrich, rhea, emu, and cassowary.

Education

██████████ Agricultural High School ██████████

(Majored in Production Animal Science, recipient of the ██████████ Award for excellence in Animal Science)

- ◆ AZA's "Professional Management Development For Zoo and Aquarium Personnel" years 1 and 2 ██████████
- ◆ AZA's "Creating Successful Exhibits" ██████████
- ◆ ██████████ Laboratory of Ornithology's "Home Study Course in Bird Biology" ██████████
- ◆ ██████████ Waterfowl Center "Avian Husbandry and Management Program" ██████████
- ◆ University of ██████████ "Master Hoof Care Program" ██████████
- ◆ ██████████ Veterinary Associations "Chemical and Physical Restraint of Wildlife" ██████████

Professional Membership and Affiliation

- ◆ AZA Professional member since ██████████
- ◆ ██████████ Ornithological Society since ██████████
- ◆ Participate in Disney's Wildlife Monitoring Program as core member of the Bird Team.
- ◆ North American Studbook Keeper for pink-backed pelican

Rachel Beth Daneault

Objective Provide uncompromising animal care and guest experience through the development of keeper staff, partnerships and participation in AZA organizations and continued self-development.

Professional Experience [REDACTED] **Disney's Animal Kingdom** **Lake Buena Vista, FL**

Primate - Carnivore Team [REDACTED]

- Primate - Carnivore Zoological Manager: Co-manage a team of 23 animal keepers caring for gorillas, siamangs, gibbons, mandrills, colobus monkeys, tigers, meerkats and bats

Primate Team [REDACTED]

- Primate Zoological Manager: Co-manage a team of 16 animal keepers caring for gorillas, siamangs, gibbons, mandrills and colobus monkeys

Behavioral Husbandry Team [REDACTED]

- Global BH Zoological Manager: Responsible for the development and communication of training and enrichment philosophies and applications to all animal programs teams
- Colors Zoological Manager: Co-managed a team of 15 keepers caring for various North American animals in a show setting
- Colors Animal Keeper: Responsible for the daily husbandry, enrichment and training of various North American animals in a show setting

Primate Team [REDACTED]

- Primate Keeper: Responsible for daily husbandry, enrichment and training of gorillas, siamangs, gibbons, mandrills, colobus monkeys, Mona monkeys and yellow-backed duiker

Oasis Team [REDACTED]

- Oasis Keeper: Responsible for daily husbandry, enrichment and training of various species of mammals, birds, reptiles, amphibians and invertebrates

[REDACTED] **Zoo** [REDACTED]

Zookeeper

- Responsible for daily husbandry, enrichment and training of small mammals and birds in the Asia Valley area

[REDACTED] **Zoological Gardens** [REDACTED]

Intern

- Assisted zookeepers with daily husbandry of red pandas including training and enrichment
- Assisted enrichment coordinator with implementation of enrichment
- Assisted zookeepers with daily husbandry of animals in the children's zoo

Education Instructor

- Bedtime with the Beasts overnight program

Education

[REDACTED] **University of** [REDACTED]

- B.S. degree in Zoology

Related Positions

Studbook keeper for the Schmidt's Red-tail Monkey

Editor for the Enrichment Options Column in the *Animal Keeper's Forum the Journal of the American Association of Zoo Keepers, Inc.*

Member of the AAZK National Enrichment Committee

AZA Instructor for PMP II Course

Member of the guenon management group

Member of the Gorilla Behavioral Advisory Group (GBAG)

Member of Gorilla Workshop Steering Committee

Member of the gorilla management group

Secretary for the gorilla management group

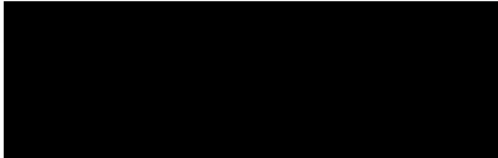
Chairperson for Gorilla Behavioral Advisory Group

Rebecca Sellin Phillips

Curriculum Vitae

Address:

Home



Work

PO Box 10,000
Lake Buena Vista, FL 32830
Phone: 407-939-7342
Fax: 407-939-6391
Email: Rebecca.S.Phillips@Disney.com

Education

M.S. Biology, [REDACTED]
University of [REDACTED]
Advisor: Dr. Jane Waterman
Thesis title: The influence of hormones and sexual swellings on social interactions in female mandrills (*Mandrillus sphinx*).

B.S. Zoology and B.S. Psychology, [REDACTED]
University of [REDACTED]
Advisor: Dr. Charles Snowdon

Research Experience

Behavioral research on captive mandrill troop, Principle Investigator, Disney's Animal Kingdom. Designed ethogram and data collection methodology, collected and analyzed data. [REDACTED]

Endocrine analysis of female mandrill urine to determine hormonal fluctuations during estrous, Disney's Animal Kingdom. Collected urine, validated hormonal assay for single antibody system for mandrill species, ran PdG, E1C, creatinine, used both single and double antibody system enzyme immunoassays. [REDACTED]

Polar bear research in Churchill Manitoba with Dr. Jane Waterman, [REDACTED] Recorded behavioral data on polar bear social interactions. Trained Earth Watch volunteers appropriate research methodology. Photo documented bears for individual identification.

Cape ground squirrel research, Namibia. Trapped, pit tagged, marked and measured ground squirrels for behavioral study conducted by Dr. Jane Waterman, [REDACTED]

Cotton-top tamarin behavioral study, Dr. Charles Snowdon's lab, University of Wisconsin-Madison. Assisted Ph.D. students with collection of behavioral data, weights, and urine for hormonal analysis, [REDACTED]

Mycogen Plant Science/Agrigenetics, Madison, WI. Used sterile techniques, maintenance of plant tissue cultures, prepared plant media, planned and conducted corn and cotton experiments, [REDACTED]

Publications

The Lesser-Known Ape: Husbandry Training of Gibbons and Siamangs. Beth Richards, Linda Owen, Shaunna Mullins-Cordier, Rebecca Sellin. Presented at The Apes: Challenges for the Twentieth Century. Chicago, IL 2000.

Complete Analysis and Breeding Plan for Cotton-top Tamarins. January 2002.

Complete Analysis and Breeding Plan for Cotton-top Tamarins. January 2003.

Assessment of the bushmeat message at Disney's Animal Kingdom. Kathy Lehnhardt, Devan Hauck, Stephanie Wilson, Rebecca Sellin, Chris Kuhar, Lance Miller. Journal of International Zoo Educators Association. (40), 2004.

Philosophy of bachelor gorilla management at Disney's Animal Kingdom. Rebecca Sellin, Beth Richards, Barb Weber. Presented at the 2004 Rocky Mountain Gorilla Workshop in Calgary. June 2004.

Managing wounds in gorillas through husbandry training. Beth Richards, Rebecca Sellin, Matt Goeben. Presented at the 2004 Rocky Mountain Gorilla Workshop in Calgary. June 2004.

Complete Analysis and Breeding Plan for Cotton-top Tamarins. November 2004.

Strategies for managing supportive care and reintroduction of infant hylobatidae Poster. Beth Schaefer, Beth Richards, Rebecca Sellin, Audra Sharp. Presented at 2004 AZA conference. New Orleans, LA.

Using a Problem-solving model to manage gorilla husbandry challenges. Beth Richards, Rebecca Sellin Phillips. Presented at the 2006 Gorilla workshop in Paignton England. June 2006.

Complete Analysis and Breeding Plan for Cotton-top Tamarins. October 2006.

Complete Analysis and Breeding Plan for Cotton-top Tamarins. Aug 2008.

Complete Analysis and Breeding Plan for *Mandrillus sphinx*. April 2008.

Urinary steroid hormone analysis of ovarian cycles and pregnancy in mandrills (*Mandrillus sphinx*) indicate that menses, copulatory behavior, sexual swellings and reproductive condition are associated with changing estrone conjugates (E1C) and pregnenediol-3-glucuronide (PdG). Rebecca Sellin Phillips and Catharine Wheaton. Zoo Biology 27:320-330 2008.

Cardiac ultrasound on Western Lowland Gorilla video writer and editor. 2010.

Complete Analysis and Breeding Plan for *Mandrillus sphinx*. June 2010.

Complete Analysis and Breeding Plan for Cotton-top Tamarins. 2012.

Complete Analysis and Breeding Plan for *Mandrillus sphinx*. 2012.

Presentations

Philosophy of bachelor gorilla management at Disney's Animal Kingdom. Rocky Mountain Gorilla Workshop in [REDACTED]

Managing wounds in gorillas through husbandry training. Rocky Mountain Gorilla Workshop in [REDACTED]

Husbandry class on callitrichids. Callitrichid husbandry and training workshop. [REDACTED]

Using a Problem-solving model to manage gorilla husbandry challenges. [REDACTED] Gorilla workshop in [REDACTED]

Husbandry class on callitrichids. Callitrichid husbandry and training workshop. [REDACTED]

Medical Mystery: Diagnosing a Developmentally-Delayed Gorilla. Gorilla Workshop Apenheul Primate Park. [REDACTED]

Husbandry class on callitrichids. Callitrichid husbandry and training workshop. [REDACTED]

Work Experience

Disney's Animal Kingdom, Walt Disney World, Florida [REDACTED]

Zoo Manager-Primate-Carnivore

Duties include developing professionalism in salaried keepers. Assisting global ASE with safety review practices. Assisting in creating a culture of inclusion while combining two teams.

Zoo Manager-Primates

Duties included scheduling, facilitating meetings, assisting keepers in their day to day projects. Working as a liaison between the Primate Team and other departments throughout Walt Disney World. Assisting keepers with professional development. Participating in construction projects. Participating in animal management decision-making. Assist keepers with research design and analysis. Assist with Disney Wildlife Conservation Fund proposal reviews. Assisting keepers with training and enrichment projects.

Animal Keeper-Primates

Duties included assisting with the development and participation in a research project on mandrills. Assisting with the development of the keeper associate program. Mentoring for the keeper associate program. Monitoring mandrill swellings for cycle analysis. Implementing new training and enrichment techniques to increase the welfare of the collection of projects. Work as cotton-top tamarin SSP coordinator. Development of education classes for cast members through Centers of Excellence.

Animal Keeper-Conservation Station

Duties included development of protocols for the exhibit team. Scheduling presentations for conservation station. Participated in public presentations of a variety of animal species in both formal and informal settings.

Discovery Island, Walt Disney World, Florida [REDACTED]

Animal Care Specialist-Bird Show

Duties included training a variety of bird species to perform natural behaviors in a bird show. Working with several departments to complete improvements of the back stage bird holdings. Daily care of a variety of bird species. Filled in for primate routine as needed. Trained new keepers in area.

Education Department

Duties include giving public presentations about the animals. Giving guided tours to the park guests as well as school groups. Taking care of animals used for educational classes. Worked as a liaison between the education department and animal services.

Gardens

Wildlife Department

Duties include designing animal exhibits, including a multi-species primate, bird exhibit. Created new animal guest experiences by training animals to be familiar with handling and presentations. Assisting in setting up protocols and record keeping for a variety of animal species. Responsible for monitoring USDA compliance in animal areas. Assisting in the design of animal diets. Trained the staff husbandry techniques for mammals.

Snowdon's Callitrichidae Lab, University of [REDACTED]
[REDACTED]

Assisted with colony maintenance of cotton-top tamarins and pygmy marmosets. Participated in habitat planning and construction of primate environments. Research duties include gathering behavioral data, entering data on computers, weighing infants, conditioning animals for husbandry behaviors, and collecting urine for hormonal assays.

[REDACTED] Plant Sciences (formerly [REDACTED])

Research Assistant

Professional Service and Organizations

Cotton-top Tamarin Species Survival Plan Assistant, [REDACTED]

AZA member [REDACTED]

Cotton-top Tamarin Species Survival Plan Coordinator, [REDACTED]

Mandrill SSP vice-coordinator [REDACTED]

Mandrill Studbook Keeper [REDACTED]

Co-vice coordinator for Old World Monkey TAG [REDACTED]

Teaching Experience

Designed and taught class on gorillas

Designed and taught class on primate taxonomy

Designed and taught class on population management

Designed and taught class on Callitrichid husbandry and taxonomy

ELIZABETH RICHARDS

MANAGEMENT EXPERIENCE

Disney's Animal Kingdom

Lake Buena Vista, FL

Primate Zoological Manager, Interim

- Provided feedback and development coaching for 23 keepers. Documented keeper performance.
- Responsible for daily animal management decision-making.
- Coordinated inter-zoo animal shipments.
- Facilitated the reorganization of husbandry teams and integration of staff and animals into new team
- Partnered with contractors in aspects of construction of new colobus exhibit, renovation of gibbon exhibit and design and construction of lion-tailed macaque holding and exhibit.
- Facilitated meetings and problem-solving exercises.
- Coordinated maintenance, scheduling, payroll, guest education, animal record keeping.
- Developed short- and long-term goals for animal care, guest education, employee development and conservation as member of Animal Programs Five-Year Goals Global Task Force.
- Assumed short-term management responsibilities in [REDACTED]

HUSBANDRY EXPERIENCE

Disney's Animal Kingdom

Lake Buena Vista, FL

Zookeeper

- Provide husbandry care, training and enrichment for primates (gorilla, mandrill, colobus, white-cheeked gibbon, siamang, mona monkey), tigers, meerkats and bats.
- Train advanced husbandry behaviors including cardiac ultrasound, maternal care, and blood pressure.
- Mentor and train new keepers.
- Act as team coordinator for animal record keeping. Duties include: developing and testing programmatic aspects of computerized record keeping system, creating global guidelines for entry content format, designing and teaching recordkeeping classes for Animal Care teams, maintaining quality of data input, composing ZIMS summaries.
- Review Disney Conservation Fund grant proposals for the Africa

BETH.A.RICHARDS@DISNEY.COM

region and help determine award recipients and Conservation Heroes.

- Participate in Gorilla Behavior Advisory Group within the Gorilla SSP to advise institutions on husbandry and management challenges with gorillas.
- Partnered with staff at Lincoln Park Zoo and Granby Zoo to develop and implement bachelor gorilla introduction plans.
- Consult with keepers at other institutions about training and management challenges and methods.
- Developed management and husbandry training protocols for at-risk dams, infants and troopmates as member of Primate Handrearing Task Force.
- Designed and taught primate behavior and natural history curriculum; train front-line employees about animal behavior and conservation to share with guests in partnership with Education and Operations.
- Functioned as principal investigator for long-term mandrill research project. Duties included: collecting and analyzing data, training new observers, coordinating scheduling.
- Hand-reared gibbon, siamang and mandrill infants.
- Conducted interviews for various media projects
- Walt Disney World Excellence Award for development and implementation of initial framework for computerized animal records system.
- Partners in Excellence, WDW lifetime achievement award.

Zookeeper

- Provided husbandry care for primates (including lion-tailed macaques), large cats, bears, marsupials, birds and reptiles.
- Trained orang-utans and gorillas for body part presentations, medical behaviors and maternal care.
- Presented educational talks to groups of all ages using live small mammals, reptiles and invertebrates. Lead overnight conservation-based programs for children's groups.
- Hand-reared orang-utan, gorilla, lar gibbon and white-cheeked gibbon infants.

EDUCATION

B.A. with Honors, Anthropology.

Completed 8-week Environmental Studies Internship at Zoo on estrous swellings and reproductive behavior in lion-tailed macaques.

- Courses at Disney's Animal Kingdom Animal Programs department:

Training Methods I and II, Enrichment Methods, Research Methods I and II, Basic Endocrinology for the Zoo Professional, Basic Nutrition for Zoo Animals, Media Training.

- Professional development and leadership courses at Walt Disney World.

PUBLICATIONS

Medical Mystery: Evaluation and management of a developmentally-delayed gorilla. 2012 Gorilla Workshop.

Managing a family gorilla group with maturing male offspring. Presented at 2008 Gorilla Workshop.

Using a Problem-solving model to manage primate husbandry challenges at Disney's Animal Kingdom. Poster. Orangutan Husbandry Workshop, 2008.

Using a problem-solving model to manage gorilla husbandry challenges. 2006 Gorilla Workshop.

Philosophy of Bachelor Gorilla Management at Disney's Animal Kingdom. Rocky Mountain Gorilla Workshop, 2006.

Managing Wounds in Gorillas Through Husbandry Training. Rocky Mountain Gorilla Workshop, 2004.

Managing Supportive Care and Reintroduction of Infant Hylobatidae. Poster. AZA National Conference, 2004.

Gorilla Husbandry Training for Assisted Reproduction. Training video produced for gorilla assisted reproduction project, 2002.

Using Enrichment as a Management Tool. *Animal Keepers' Forum*, 2002.

The Lesser-Known Ape: Husbandry Training of Gibbons and Siamangs. Presented at The Apes: Challenges for the 21st Century, 2000.

Barbara Weber

EDUCATION

University of [REDACTED]
Bachelor of Science, Agriculture. [REDACTED]
Major: Animal Science

EXPERIENCE

Primate Zoological Manager, Disney's Animal Kingdom, LBV, FL
[REDACTED]

- Act as primary contact for veterinary, nutrition, horticulture, operations and maintenance.
- Responsible for supervision and coordination of keeper duties including: hiring, training, scheduling, animal husbandry and medical procedures.
- Responsible for staff development including coaching, feedback, teambuilding and performance evaluations for 16 keepers.
- Participate in team managing all aspects of primate collection and staff.
- Participate in the Behavioral Husbandry Team ZM Focus Group
- Opening Team member for Disney's Animal Kingdom.

Senior Keeper – Primates, [REDACTED] Zoological Park [REDACTED]
[REDACTED]

All duties listed for Keeper position (below), as well as, additional supervisory duties:

- Supervised staff and animal management in the absence of Lead Keeper.
- Coordinator of departmental keeper intern program including interviewing candidates, selection and placement of interns with mentors, orientation, training and performance evaluations.
- Assisted in development and design of animal exhibits and holding areas.

Keeper – Primates, [REDACTED] Zoological Park [REDACTED]
[REDACTED]

- Experience working with a variety of taxa including primates, birds, small mammals, ungulates and edentates.
- Extensive experience managing a large and diverse animal collection in a wide variety of groupings, including mixed-species habitats.
- Extensive experience utilizing operant conditioning techniques to increase and enhance animal husbandry and welfare.

PROFESSIONAL MEMBERSHIPS

- **Member-** American Zoological Association [REDACTED]
- **Member-** AZA Gibbon SSP Management Group [REDACTED]
 - Gibbon Maternal Care liaison
- **Member-** Ape TAG steering committee [REDACTED]
 - Ape training liaison

PRESENTATIONS

- **"Orang-utan Behavioral Enrichment"**, poster presented at Neglected Apes Conference [REDACTED]
- **"Orang-utan Behavioral Enrichment"**, presented at Orang-utan Keeper Workshop. [REDACTED]
- **"Establishing and Managing a Bachelor Troop of Gorilla's at Disney's Animal Kingdom"**, presented at The Apes: Challenges for the [REDACTED] Century. [REDACTED]
- **Chimpanzee Training Workshop.** [REDACTED] [REDACTED]
Created curricula, presented lecture material as well as, practical training in the use of operant conditioning to the animal care staff at a sanctuary for confiscated chimpanzees.

PUBLICATIONS

- Weber B., Bond M. Orangutan/Keeper Relationship. *Orangutan Husbandry Manual*. 1997.
- Sodaro C., Weber B. Hand-rearing and Early Reintroduction of a Sumatran Orangutan, *International Zoo Yearbook*, Volume 37.
- Weber B., Orangutan Enrichment Options at Brookfield Zoo. *The Shape of Enrichment*. August, 1998.
- Weber B., Philipp C., and Pratt N. Establishing and Managing a Bachelor Troop Of Gorillas at Disney's Animal Kingdom. *The Apes: Challenges for the 21st Century*, May, 2000.
- Cantrell R., Breder C., and Weber B. A Behavioral Management Plan for Bachelor Gorillas at Disney's Animal Kingdom. 2003 AZA Regional Conference.
- Sellin R., Richards B., and Weber B. Philosophy of Bachelor Gorilla Management at Disney's Animal Kingdom. *International Gorilla Workshop Proceedings, 2006*.

Additional course work includes:

AZA Schools for Zoos and Aquarium Personnel

Professional Management Development (First Year, 1999)

Professional Management Development (Second Year, 2000)

Walt Disney World Company

Leadership Training

Research Methods

Training Methods

Enrichment Methods

References available upon request.

GEOFF PYE

DISNEY'S ANIMAL KINGDOM, DEPARTMENT OF HEALTH
[REDACTED] • LAKE BUENA VISTA • FL [REDACTED] • USA
PHONE 407 938 2719 • E-MAIL GEOFFREY.W.PYE@DISNEY.COM

PROFILE

Twenty-seven years as a veterinarian. Twenty-one years of experience in the field of zoological medicine. Graduate of the University of Melbourne. Internship at Kansas State University, Residency at University of Florida, Masters in Wild Animal Health, Diplomate of the American College of Zoological Medicine. Fifteen years as Consultant (Exotic Mammals) for the Veterinary Information Network.

EDUCATION, EXAMINATIONS, AND DEGREES

2014	USDA Federal Accreditation, FL, USA
2014	Florida Board of Veterinary Medicine Examination, USA
2005	USDA Federal Accreditation, CA, USA
2005	California Veterinary Medical Board Examination, USA
2005	ECFVG Certificate, USA
2005	Clinical Proficiency Examination, USA
2003	North American Veterinary Licensing Examination, USA
2001	Diplomate of the American College of Zoological Medicine, USA
1998 - 2001	Residency in Zoological Medicine, University of Florida, USA
1997 - 1998	Internship in Zoological Medicine, Kansas State University, USA
1994 - 1995	Master of Science in Wild Animal Health, University of London, United Kingdom
1984 - 1988	Bachelor of Veterinary Science, University of Melbourne, Australia

PROFESSIONAL EXPERIENCE

2014 – present	Animal Health Director, Disney's Animal Kingdom, USA
2013 - present	Committee member, AZA Animal Health Committee
2013 - present	Committee member, AZA Monotreme and Marsupials TAG
2013 - present	Veterinary Co-advisor, AZA Monotreme and Marsupials TAG
2005 - 2014	Senior Veterinarian, San Diego Zoo, USA
2007 - present	Veterinary Advisor, AZA Koala SSP
2002 - 2005	Veterinarian, Werribee Open Range Zoo, Australia
2001 - 2002	Clinical Instructor, Disney's Animal Kingdom, USA
2000 - 2001	Veterinary Resident, White Oak Conservation Center, USA
2000 - present	Consultant (Exotic mammals), Veterinary Information Network (VIN), USA
1999 - 2004	Associate Editor, Journal of Avian Medicine and Surgery, USA
1998 - 2000	Resident in Zoological Medicine, University of Florida, USA
1997 - 1998	Intern in Zoological Medicine, Kansas State University, USA
1996 - 1997	Acting Senior Veterinarian, Currumbin Sanctuary, Australia
1996	Veterinarian (Relief), Western Plains Zoo, Australia
1995 - 1996	Veterinarian (Fixed term contract), Melbourne Zoo, Australia
1994 - 1995	Masters Degree Student, London Zoo, United Kingdom
1989 - 1995	Veterinarian, private practice, Australia and the United Kingdom

PUBLICATIONS – JOURNALS (*mentor of primary author)

1. *Bercier M, K Alexander, A Gorow, and **GW Pye**. Magnetic resonance imaging, computed tomography, and gross cross-sectional views of the normal anatomy of the koala (*Phascolarctos cinereus*) nasal cavity and paranasal sinuses. *J. Zoo Wildl. Med.* 45(4):766-774.
2. *Rivas AE, **GW Pye**, and R Papendick. 2014. Dermal hemangiosarcoma in a sugar glider (*Petaurus breviceps*). *J. Exotic Pet Med.* 23(4):384-388.
3. *Phair KA, M Sutherland-Smith, **GW Pye**, AP Pessier, and TL Clippinger. 2014. Esophageal dissection and hematoma associated with obstruction in an Indian elephant (*Elephas maximus indicus*). *J. Zoo Wildl. Med.* 45(2):423-427.
4. *Perry SM, **GW Pye**, and DA Fagan. 2014. Dental onlay bridge-like prosthesis in three northern koalas (*Phascolarctos cinereus*): The use of Premis™ trimodal composite to prevent interproximal *Encalyptus* spp. retention and infection. *J. Zoo Wildl. Med.* 45(2):450-453.
5. **Pye GW**, RN Johnson, and AD Greenwood. 2014. Preface to papers presented at the Koala Retrovirus Workshop, San Diego Zoo, April 2013. In *The Koala and its Retroviruses: Implications for Sustainability and Survival*, ed. **GW Pye**, RN Johnson, and AD Greenwood. Technical Reports of the Australian Museum, Online 24: 1–2.
6. **Pye GW**, HQ Zheng, and WM Switzer. 2014. Retrovirus-related disease in zoo-based koalas (*Phascolarctos cinereus*) in North America. In *The Koala and its Retroviruses: Implications for Sustainability and Survival*, ed. **GW Pye**, RN Johnson, and AD Greenwood. Technical Reports of the Australian Museum, Online 24: 55–56.
7. **Pye GW**, RN Johnson, and AD Greenwood. 2014. Koala Retrovirus Workshop conclusion. The future of KoRV Research—foundational and applied. In *The Koala and its Retroviruses: Implications for Sustainability and Survival*, ed. **GW Pye**, RN Johnson, and AD Greenwood. Technical Reports of the Australian Museum, Online 24: 103–105.
8. *Joyce-Zuniga NM, J Roesler, C Hamlin-Andrus, M Sutherland-Smith, B Rideout, **GW Pye**. 2014. Gastrointestinal torsion and intussusception in the northern koala (*Phascolarctos cinereus*) at the San Diego Zoo (1976-2012). *J. Zoo Wildl. Med.* 45(1):118-126.
9. D Schmidt, **GW Pye**, CH Andrus, W Ellis, MR Ellersieck, T Chen, and M Holick. 2013. Fat-soluble vitamin and mineral comparisons between zoo-based and free-ranging koalas (*Phascolarctos cinereus*). *J. Zoo Wildl. Med.* 44(4):1079-1082.
10. *Belasco-Zeitz M, **GW Pye**, RE Burns, and AP Pessier. 2013. Clinical Challenge: Cobra renal adenocarcinoma. *J. Zoo Wildl. Med.* 44(3):807-810.
11. Xu W, CK Stadler, K Gorman, N Jensen, D Kim, H Zheng, S Tang, WM Switzer, **GW Pye**, and MV Eiden. 2013. An exogenous retrovirus isolated from koalas with malignant neoplasias in a US Zoo. *Proc. Nat. Acad. Sci.* 110(28):11547-11552
12. **Pye GW**, W Ellis, S Fitzgibbon, B Opitz, L Keener, and B Hollis. 2013. Vitamin D reference values in free-ranging koalas (*Phascolarctos cinereus*). *J. Zoo Wildl. Med.* 44(2):480-483.
13. **Pye GW**, SC Gait, B Mullet, M Delclaux Real de Asua, E Martinez-Nevado, CJ Bonar, EA Baines. 2013. Metabolic bone disease in juvenile koalas (*Phascolarctos cinereus*). *J. Zoo Wildl. Med.* 44(2):273-279.
14. *Bercier M, J Wynne, S Klause, CK Stadler, A Gorow, and **GW Pye**. 2012. Nasal mass removal in the koala (*Phascolarctos cinereus*). *J. Zoo Wildl. Med.* 43(4):898-908.
15. Wynne J, S Klause, CK Stadler, **GW Pye**, W Meyer, JE Sykes. Pre-shipment testing success: Resolution of a nasal sinus granulomas in a captive koala (*Phascolarctos cinereus*) caused by *Cryptococcus gattii*. *J. Zoo Wildl. Zoo.* 43(4):939-942.
16. *Burgdorf-Moisuk A, **GW Pye**, J Smith, R Papendick, J Ivy, and C Hamlin-Andrus. 2012. A retrospective and prospective study of megaesophagus in parma wallabies (*Macropus parma*). *J. Zoo Wildl. Med.* 43(1):89-94.
17. **Pye GW**, W Ellis, S Fitzgibbon, B Opitz, L Keener, K Arheart, and C Cray. 2012. Serum protein electrophoresis values for free-ranging and zoo-based koalas (*Phascolarctos cinereus*). *J. Zoo Wildl. Med.* 43(1):177-180.
18. *Burgdorf-Moisuk A, I Stalis, and **GW Pye**. 2012. Disseminated coccidioidomycosis in a koala (*Phascolarctos cinereus*). *J. Zoo Wildl. Med.* 43(1):197-199.
19. **Pye GW**. 2010. Preventive medicine success – Thymoma removal in a spot-necked otter (*Lutra maculicollis*) *J. Zoo Wildl. Med.* 41(4):732-734.
20. **Pye GW**. 2009. Shoulder dysplasia in koalas (*Phascolarctos cinereus*) at the San Diego Zoo. *J. Zoo Wildl. Med.* 40(3):453-457.
21. Robbins PK, **GW Pye**, M Sutherland-Smith, R Papendick, M Greenberg, D Levy, and M Madani. 2009. Successful transabdominal subxyphoid pericardiostomy to relieve chronic pericardial effusion in a Sumatran orang-utan (*Pongo abelli*). *J. Zoo Wildl. Med.* 40(3):564-567.
22. **Pye GW**, C Hamlin-Andrus, and J Moll. 2008. Hip dysplasia in koalas (*Phascolarctos cinereus*) at the San Diego Zoo. *J. Zoo Wildl. Med.* 39(1):61-68.

23. **Pye GW**. 2007. Intestinal entrapment in the pulmonary ostium following castration in a juvenile ostrich (*Struthio camelus*). *J. Avian Med. Surg.* 21(4):290-293.
24. Neiffer DL, MA Miller, M Weber, M Stetter, DK Fontenot, PK Robbins, and **GW Pye**. 2005. Standing sedation events in African elephants (*Loxodonta africana*) using detomidine-butorphanol combinations. *J. Zoo Wildl. Med.* 36(2):250-256.
25. **Pye GW**, DR Brown, MF Nogueira, KA Vliet, TR Schoeb, ER Jacobson, RA Bennett. 2001. Experimental inoculation of *Mycoplasma alligatoris* in broad-nosed caimans (*Caiman latirostris*) and Siamese crocodiles (*Crocodylus siamensis*). *J. Zoo Wildl. Med.* 32(2):196-201.
26. Brown DR, MF Nogueira, TR Schoeb, KA Vliet, RA Bennett, **GW Pye**, and ER Jacobson. 2001. Pathology of experimental *Mycoplasma alligatoris* infection in American alligators. *J. Wildl. Dis.* 37(4):671-679.
27. **Pye GW**, RA Bennett, R Plunsk, and J Davidson. 2001. Endoscopic salpingohysterectomy in juvenile cockatiels (*Nymphicus hollandicus*). *J. Avian Med. Surg.* 15(2):90-94.
28. **Pye GW**, RA Bennett, SM Newell, J Kindred, and R Johns. 2000. Magnetic resonance imaging in psittacines with chronic sinusitis. *J. Avian Med. Surg.* 14(4):243-256.
29. **Pye GW**, RA Bennett, SP Terrell, P Ginn, LJ McSherry, and R Alleman. 2000. A T-cell-rich, B-cell lymphoma in a ring-tailed lemur, *Lemur catta*. *J. Zoo Wildl. Med.* 31(3):388-393.
30. **Pye GW**, RA Bennett, G Roberts, and S Terrell. 2000. Thoracic vertebral chordoma in a domestic ferret, *Mustela furo putorius*. *J. Zoo Wildl. Med.* 31(1):107-111.
31. **Pye GW**, ER Jacobson, SM Newell, T Skase, D Heard, and P Dennis. 2000. *Serratia marcescens* infection in a gopher tortoise, *Gopherus polyemus* and magnetic resonance imaging for diagnosing systemic disease. *Bulletin of the Association of Amphibian and Reptilian Veterinarians* 9(4):8-11.
32. **Pye GW**, and JW Carpenter. 1999. Clinical medicine and surgery of the sugar glider, *Petaurus breviceps*. *Veterinary Medicine* (10):891-905.
33. **Pye GW**, JW Carpenter, J Goggin, and C Bacmeister. 1999. Metastatic squamous cell carcinoma in a Moluccan cockatoo, *Cacatua moluccensis*. *Journal of Avian Medicine and Surgery* 13(3):192-200.
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36. **Pye GW**, and JW Carpenter. 1997. Ketamine sedation followed by propofol anesthesia in a slider, *Trachemys scripta*, to facilitate removal of an esophageal foreign body. *Bulletin of the Association of Reptilian and Amphibian Veterinarians* 8(1):16-17.
37. *Middleton S, A Fitzgerald, and **GW Pye**. 1997. Captive breeding of the frilled lizard, *Chlamydosaurus kingii*. *Monitor* 9(1):6-7.

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1. Booth R and **GW Pye**. Marsupials, In: *Clinical Pathology of Exotic Animals*. Submitted second review
2. **GW Pye**. 2012. Zoo based conservation: collection-driven koala health research. In: Flint, N. and Melzer, A. (eds). 2012. *Conserving central Queensland's koalas*. Koala Research Centre of Central Queensland, CQ University Australia, Rockhampton, Qld.
3. Brust D and **GW Pye**. 2012. Sugar Gliders. In: *Exotic Animal Formulary 4th edition*. Carpenter JW (ed). Elsevier. Pp. 438-454.
4. Bennett RA and **GW Pye**. 2007. General Surgery. In: *Ferret husbandry, medicine, and surgery. 2nd edition*. Lewington JH (ed). WB Saunders. Pp. 330-339.
5. **Pye, GW**. 2004. Sugar Gliders. In: *Exotic Animal Formulary 3rd edition*. Carpenter JW (ed). WB Saunders Pp. 345-358.
6. **Pye GW**. 2003. Apodiformes and Coliiformes. In: *Zoo and Wildlife Medicine. 5th Ed*. Fowler M and E Miller (eds). WB Saunders. Pp. 239-245.
7. **Pye GW**. 2001. Marsupial, Insectivore, and Chiropteran Anesthesia. *Veterinary Clinics of North America: Exotic Animal Practice: Anesthesia.* 4(1):211-237.
8. **Pye, GW**. 2001. Sugar Gliders. In: *Exotic Animal Formulary 2nd edition*. Carpenter JW et al. (eds). WB Saunders. Pp. 251-259.
9. Bennett RA and **GW Pye**. 2000. General Surgery. In: *Ferret husbandry, medicine, and surgery*. Lewington JH (ed). Butterworth and Heinemann, Oxford. Pp. 240-250.
10. **Pye GW**. 2000. Surgery of the avian respiratory tract. *Veterinary Clinics of North America: Exotic Animal Practice: Soft-tissue Surgery.* 3(3):693-713.

PUBLICATIONS – PROCEEDINGS, CONFERENCES, AND CONTINUING EDUCATION
(*mentor of primary author)

1. Pye GW, C Wallace, M Marinkovich, P Morris, and B Rideout. 2014. Institutional Risk analysis: A smarter basis for preshipment testing and quarantine elimination? Proc. Ann. Conf. Am. Assoc. Zoo Vet.
2. *Castro AA, C Witte, and GW Pye. 2014. Retrospective study of morbidity in koalas (*Phascolarctos cinereus*) at San Diego Zoo between 1967 and 2013. Ann. Conf. Am. Assoc. Zoo Vet. Poster.
3. *Lewis N, C Witte, and GW Pye. Descriptive epidemiological study of koala retrovirus at the San Diego Zoo over a 20 year period. Ann. Conf. Am. Assoc. Zoo Vet. Poster.
4. Pye GW. 2014. There's a tiger in my clinic: Big kitty medicine & surgery. Proc. Western Vet. Conf.
5. Pye GW. 2014. Preventive medicine in zoos: 500 species in 50 minutes. Proc. Western Vet. Conf.
6. Pye GW. 2014. Behavioral conditioning: Easier medical management in zoos. Proc. Western Vet. Conf.
7. Pye GW. 2014. Everybody loves koalas: Veterinary care for charismatic creature. Proc. Western Vet. Conf.
8. Pye GW and A Gillett. 2014. Veterinary assessment and care of wild koalas for rehabilitation. Veterinary Information Network.
9. *Kinney M and GW Pye. 2013. Current understanding and health implications of koala retrovirus in zoologic collections. Ann. Conf. Am. Assoc. Zoo Vet. P. 57.
10. *Perry SM, GW Pye, and DA Fagan. 2013. Dental onlay bridge-like prosthesis in three koalas (*Phascolarctos cinereus*): The use of Premis™ trimodal composite to prevent interproximal *Eucalyptus* spp. retention and infection. Ann. Conf. Am. Assoc. Zoo Vet. P. 63 (Second place student presentation).
11. *Bercier M, K Alexander, A Gorow, and GW Pye. Magnetic resonance imaging, computed tomography, and gross cross-sectional views of the normal anatomy of the koala (*Phascolarctos cinereus*) nasal cavity and paranasal sinuses. Ann. Conf. Am. Assoc. Zoo Vet. Poster.
12. *Joyce-Zuniga NM, J Roesler, C Hamlin-Andrus, M Sutherland-Smith, B Rideout, GW Pye. 2012. Gastrointestinal torsion and intussusception in the northern koala (*Phascolarctos cinereus*) at the San Diego Zoo. Ann. Conf. Am. Assoc. Zoo Vet. P. 50.
13. Pye GW. 2012. Surgery and medicine of primates for the private practitioner. Proc. Western Vet. Conf.
14. Pye GW. 2012. Sugar glider medicine and surgery. Proc. Western Vet. Conf.
15. Pye GW. 2012. Kangaroo and wallaby for the private practitioner. Proc. Western Vet. Conf.
16. Pye GW. 2012. You belong in a zoo – how to deal with unusual species in your practice. Proc. Western Vet. Conf.
17. Xu W, CK Stadler, D Kim, M Alemaheyu, W Switzer, GW Pye, and MV Eiden. 2011. Identification of a novel gammaretrovirus in koalas (*Phascolarctos cinereus*) in US zoos. 23rd Workshop on Retroviral Pathogenesis, Montpellier, France.
18. *Burgdorf-Moisuk A, GW Pye, R Papendick, J Ivy, C Hamlin-Andrus, and J Smith. 2011. A retrospective and prospective study of megaesophagus in parma wallabies (*Macropus parma*). Proc. Amer. Assoc. Zoo Vet. Conf. P.
19. Pye GW and D Brust. 2011 (Aug). Sugar Glider Medicine and Surgery. Veterinary Information Network.
20. Pye GW. 2011. Koala Medicine and Surgery. International Conference on Diseases of Zoo and Wild Animals, Lisbon, Portugal.
21. Pye GW and D Brust. 2011 (Jan). Sugar Glider Medicine and Surgery. Veterinary Information Network.
22. Pye GW. 2010. Avian Anesthesia and Surgery. Proc. Assoc. Zoo Vet. Tech. Conf.
23. Pye GW. 2010. Reptile Anesthesia and Surgery. Proc. Assoc. Zoo Vet. Tech. Conf.
24. Pye GW. 2010. Koala Anesthesia and Surgery. Proc. Assoc. Zoo Vet. Tech. Conf.
25. Bicknese E, A White, A Pessier, and GW Pye. 2010. Cryptococcal meningitis and optic nerve neuritis in a Chinchilla (*Chinchilla lanigera*). Proc. Assoc. Exotic Mammal Vet. Conf.
26. Pye GW. 2010. Marsupial Medicine. Veterinary Information Network.
27. Pye GW. 2010. Primate Medicine for the Private Practitioner. Proc. 25th Annual Avian Exotic Med. Symposium. Pp. 65-72.
28. Pye GW. 2009. Koala Medicine. Veterinary Information Network.
29. Robbins PK., GW Pye, M Sutherland-Smith, R Papendick, and M Madani. 2008. Successful transabdominal subxyphoid pericardiostomy to relieve chronic pericardial effusion in a 46-year-old female Sumatran orangutan (*Pongo abelli*). Proc. Amer. Assoc. Zoo Vet. Conf. P. 153.
30. Pye GW. 2008. The radiographic development of severe hip and shoulder dysplasia in a juvenile koala (*Phascolarctos cinereus*). Proc. Amer. Assoc. Zoo Vet. Conf. P. 65.
31. D Schmidt, GW Pye, CH Andrus, W Ellis, F Bercovitch, Z Lu, T Chen, M Holick. 2008. Vitamin and mineral comparisons between zoo-based and free-ranging koalas (*Phascolarctos cinereus*) and the implications for the development of hip and shoulder dysplasia. Proc. Amer. Assoc. Zoo Vet. Conf. P. 23.

32. **Pye GW**. 2008. Marsupial Medicine and Surgery. Proc. Exotic Animal Medicine for the Clinical Practitioner CE Conf.
33. **Pye GW**. 2008. Primate Medicine and Surgery. Proc. Exotic Animal Medicine for the Clinical Practitioner CE Conf.
34. **Pye GW**. 2008. Hip dysplasia in koalas (*Phascolarctos cinereus*) at San Diego Zoo. Proc. Vet. Nurses Council of Australia Conference: Zoo and Wildlife Forum. P. 33.
35. **Pye GW**. 2007. Hip dysplasia in northern koalas (*Phascolarctos cinereus adjustus*). Proc. Amer. Assoc. Zoo Vet. Conf. P. 204.
36. **Pye GW** and N Lamberski. 2007. Immobilization of Exotic Hoofstock. Veterinary Information Network.
37. **Pye GW**. 2007. The Safe Use of Ultrapotent Opioids. Veterinary Information Network.
38. **Pye GW** and M Sutherland-Smith. 2006. Primate Medicine and Surgery. Veterinary Information Network.
39. **Pye GW**. 2006. Preventive Medicine in Zoos. Veterinary Information Network.
40. **Pye GW**, M Johnston, and N. Antinoffl. 2004. Basic ferret medicine. Veterinary Information Network.
41. **Pye GW**. 2004. Intestinal entrapment in the pulmonary ostium following castration in a juvenile ostrich (*Struthio camelus*). Proc. Amer. Assoc. Zoo Vet. Conf. p. 261.
42. **Pye GW**, S Accime, S Citino, and L Penfold. 2004. Semen characterization and cryopreservation in eastern giant eland (*Taurotragus derbianus gigas*). Proc. Amer. Assoc. Zoo Vet. Conf. p.124.
43. **Pye GW**. 2004. Avian Anaesthesia and Analgesia. Veterinary Nurses Council of Australia & Association of Zoo Veterinary Technicians Conference.
44. **Pye GW**. 2004. Reptile Anaesthesia and Analgesia. Veterinary Nurses Council of Australia & Association of Zoo Veterinary Technicians Conference.
45. **Pye GW**. 2003. Ferret basics. Proc. North Amer. Vet. Conf. pp.1257-1258.
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47. **Pye GW**. 2003. Emerging issues / controversy – small mammals: Wild Animals as Pets. Proc. North Amer. Vet. Conf. pp. 1262-1263.
48. **Pye GW**. 2003. Wallabies - the basics. Proc. North Amer. Vet. Conf. pp. 1290-1292.
49. **Pye GW**, SB Citino, M Bush, L Klein, and W Lance. 2001. Anesthesia of eastern giant eland (*Taurotragus derbianus gigas*) at White Oak Conservation Center. Proc. Amer. Assoc. Zoo Vet. pp. 226-231.
50. *Kimber K, **Pye GW**, Dennis PM, Citino SB, Heard DJ, and RA Bennett. 2001. Diaphragmatic hernias in cheetah (*Acinonyx jubatus*). Proc. Amer. Assoc. Zoo Vet. p. 151.
51. **Pye GW**, RA Bennett, R Plunske, J Davidson, and E Rooney. 2001. Endoscopic salpingohysterectomy in juvenile cockatiels (*Nymphicus hollandicus*). Proc. Assoc. Avian Vet. pp. 207-209.
52. **Pye GW**, RA Bennett, R Plunske, J Davidson, and E Rooney. 2001. The effect of endoscopic salpingohysterectomy in juvenile cockatiels (*Nymphicus hollandicus*) on ovulation. Proc. European Assoc. Avian Vet. pp. 66-69.
53. **Pye GW**. 2000. Anesthesia and manual restraint of marsupials and monotremes. Proc. Amer. Assoc. Zoo Vet. Tech. pp. 89-96.
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55. *Hart S, **Pye GW**, and RA Bennett. 2000. Subtotal colectomy in a tiger (*Panthera tigris*). Proc. Amer. Assoc. Zoo Vet. Conf. pp. 78-79.
56. **Pye GW**, DR Brown, M Nogueira, K Vliet, T Schoeb, ER Jacobson, and RA Bennett. 2000. Experimental inoculation of a Mycoplasma in broad nosed caiman (*Caiman latirostris*) and Siamese crocodiles (*Crocodylus siamensis*). Proc. Amer. Assoc. Zoo Vet. Conf. pp. 48-49
57. **Pye GW**, RA Bennett, LJ McSherry, and SP Terrell. 1999. A disseminated round cell tumor in a ring-tailed lemur (*Lemur catta*). Proc. Amer. Assoc. Zoo Vet. Conf. p. 104.
58. **Pye GW**, RA Bennett, SM Newell, and R Johns. 1999. Magnetic resonance imaging for the localization of lesions in psittacines with chronic sinusitis. Proc. Amer. Assoc. Zoo Vet. Conf p. 196.
59. **Pye GW**. 1999. Small exotic felid anesthesia. Proceedings of the pre-congress short course. III Congresso V111 Encontro da Associação Brasileira de Veterinários de Animais Selvagens (Third Conference and Eighth Meeting of the Brazilian Association of Wildlife Veterinarians).
60. MF Nogueira, K Vliet, **Pye GW**, RA Bennett, ER Jacobson, TR Schoeb, and DR Brown. 1999. Inoculação experimental de crocodilianos com Mycoplasma (Experimental inoculation of crocodilians with Mycoplasma). Proceedings of the III Congresso e V111 Encontro da Associação Brasileira de Veterinários de Animais Selvagens (Third Conference and Eighth Meeting of the Brazilian Association of Wildlife Veterinarians).
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Omaha, Nebraska, USA. pp. 306-309.

62. **Pye GW.** 1998. Exotic pets: husbandry and clinical techniques. Proceedings of the Annual Veterinary Technician Conference, Kansas State University, Manhattan, Kansas, USA.
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2. Bennett RA, **GW Pye.** 2012. Avian Orthopedics. American Association of Zoo Veterinarians. Oakland, California, USA.
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6. Bennett RA, **GW Pye.** 2005. Avian Surgery. Association of Avian Veterinarians Annual Conference, Monterey, California, USA.
7. Sutherland-Smith M, K Kearns, S Vitale, and **GW Pye.** 2004. Koalas. American Association of Zoo Veterinarians Annual Conference, San Diego, California, USA
8. Bennett RA, **GW Pye.** 2001. Avian Surgery. Association of Avian Veterinarians Annual Conference, Orlando, Florida, USA.
9. Bennett RA, **GW Pye.** 2000. Avian Surgery. The North American Veterinary Conference. Orlando, Florida, USA.
10. Rosenthal K, JW Carpenter, N Morales, and **GW Pye.** 1998. Anesthesia and clinical techniques in the rabbit. 6th Annual MidWestern Exotic Animal Medicine Conference, Manhattan, Kansas, USA.

ADDITIONAL PROFESSIONAL ACTIVITIES – RESEARCH PROJECTS

1. Effects of disease and health on reproductive success in free-ranging koalas (co-investigator) 2013-2014 SDZKECP grant \$80,000
2. The use of acupuncture for the relief of pain associated with degenerative joint disease in koalas (primary investigator). 2014 SDZKECP grant \$15,000
3. The use of Streck Cell Preservative on extending complete blood count accuracy for remote field research (primary investigator) 2013 CHRI grant \$5,000
4. Koala retrovirus (co-investigator). 2012-2013 SDZKECP grant \$40,000
5. Dental attrition in free-ranging and zoo-based koalas (primary investigator) 2012 CHRI grant \$8,500
6. Vitamin D levels in free-ranging koalas (primary investigator) 2010 SDZKECP grant \$15,000
7. Serum protein electrophoresis in zoo-based and free-ranging koalas (primary investigator) 2010 SDZKECP grant \$10,000
8. Metabolic bone disease in zoo-based koalas (primary investigator)
9. Megaesophagus in parma wallabies (co-investigator) 2011 CHRI grant \$3000
10. Koala artificial insemination, estrus synchronization, and semen cryopreservation (co-investigator / collaborator)
11. Hip and shoulder dysplasia in koalas (primary investigator) 2010 CHRI grant \$17,000; 2010 SDZKECP grant \$15,000

Deidre Karen Fontenot

P.O. Box 10,000

Lake Buena Vista, Florida 32830-1000

Phone 407-939-6238/ FAX 407-939-6391

EMAIL deidre.k.fontenot@disney.com

PROFESSIONAL HISTORY

February 2014- current	Operations Manager	Disney's Animals, Science, & Environment Lake Buena Vista, Florida
Aug 2000- Feb 2014	Clinical Veterinarian	
March 2002- current	Courtesy Adjunct Professor	University of Florida College of Veterinary Medicine Dept of Small Animal Clinical Science Gainesville, Florida
July 1996- current	Adjunct Clinical Instructor	University of Georgia College of Veterinary Medicine Department of Small Animal Medicine Athens, Georgia
October 1999-May 2000	Contract Associate Veterinarian	Zoological Society of San Diego San Diego, California
January- October 1999	Veterinarian- Critical Care	SC Vet Emergency and Referral Center Columbia, South Carolina
February- April 1999	Contract Staff Veterinarian	Riverbanks Zoo and Gardens Columbia, South Carolina
June 1998-January 1999	Contract Associate Veterinarian	Riverbanks Zoo and Gardens

VETERINARY EDUCATION

May 1996	Doctor of Veterinary Medicine	University of Georgia
June 1992	Bachelors of Science, Animal Science	University of Georgia

EDUCATIONAL EXPERIENCE

December 2002	Exotic Animal Endoscopy	University of Georgia Veterinary Endoscopy Center
May 2002	Multi-purpose Rigid Endoscopy Small Animal Laparoscopy Small Animal Thoracoscopy	Colorado State University Endoscopy Teaching Center College of Veterinary Medicine

June 1997- May 1998	Veterinary Intern Veterinary Intern	Riverbanks Zoo and Gardens BB& T Clinic for Raptors & Endangered Species, Columbia, SC
July 1996- June 1997	Exotic Animal Medicine Internship Consulting Veterinarian	University of Georgia Bear Hollow Trail, Athens, GA
January 1997	Veterinary Ultrasound	Remote Veterinary Consultants
June 1996	Fish Health Management	University of Georgia
March - May 1996	Externship	Zoo Atlanta Atlanta, Georgia
February- March 1996	Externship	Riverbanks Zoo and Gardens
May- August 1994	Summer Assistantship	Yerkes Primate Research Center Atlanta, Georgia
May- August 1993	Keeper Internship Volunteer Interpreter	Cincinnati Zoo & Botanical Gardens Center for Reproduction of Endangered Wildlife Cincinnati, Ohio

PRIMARY PUBLICATIONS

Fontenot, D., Fleming, G. 2013. Chapter 18: Crocodylians (crocodiles, alligators, caiman, gharial), In: Fowler's Zoo and Wild Animal Medicine, Current Therapy. Volume 7. Eds: Miller, RE, Fowler, M, Elsevier Saunders, St. Louis, MO, in press.

Fontenot, D, Miller, J. Chapter 75: Alternatives for Gastrointestinal Parasite Control in Exotic Ruminants, In: Fowler's Zoo and Wild Animal Medicine, Current Therapy. Volume 7. Eds: Miller, RE, Fowler, M, Elsevier Saunders, St. Louis, MO, pp.581-587.

Fontenot, D., Kinney-Moscato, A., Kaplan, RM, Miller, J. 2008. "Effects of copper oxide wire particles bolus therapy on trichostrongyle fecal egg count in exotic artiodactylids". *J.Zoo.Wild.Med.* 39(4):642-645.

Fontenot, D., Terrell, SP, Malakooti, K, Medina, S. 2006. "Health Assessment of the in situ Guam rail (*Gallirallus owstoni*)". *J Avian Med Surg*, 20(4): 225- 233.

Fontenot, D., Terrell, S P, Miller, M, Robbins, PK, Stetter, M, Weber, M. 2005. "Clostridium septicum myositis in a western lowland gorilla (GORILLA GORILLA GORILLA)". *J Zoo Wild Med*, 36 (3): 509-511.

Fontenot, D., Lamberski, N., Gregory, C. 2004. "Retrospective Evaluation of Renal Disease in captive Black Howler Monkeys in U.S. Zoological Institutions". *J Zoo Wild Med*, Volume 35 (3), p.292-302.

Fontenot, D., Neiffer, D. 2004. "Wound management in teleosts fish: biology of the healing process, evaluation, and treatment". In: *Vet. Clin. Exot. Anim.* 7: p. 57- 86.

Fontenot, D., Lamberski, N., Pfaff, S. 2004. "Physiological and clinicopathological normals of the crocodile monitor (*Varanus salvadorii*)", *J. Herp. Med. Surg.*, Volume 14, No.1, p. 5-9.

OTHER PUBLICATIONS

Molter, C M., Fontenot, DK., Terrell, and SP. "USE OF DESLORELIN ACETATE IMPLANTS TO MITIGATE AGGRESSION AND CORRELATING PLASMA TESTOSTERONE CONCENTRATIONS IN TWO ADULT MALE DOMESTIC TURKEYS (MELEAGRIS GALLOPAVO), *J Avian Med Surg*, in press.

Fontenot, D. 2012. "EXHIBIT FORAGE LARVAL SURVEY FOR GASTROINTESTINAL NEMATODES FROM EXOTIC ARTIODACTYLIDS AT DISNEY'S ANIMAL KINGDOM® AND DISNEY'S ANIMAL KINGDOM LODGE®", Proc. Am. Assoc. Zoo. Vet.

Fontenot, D. 2012. "UTILIZATION OF CONTINUOUS RATE INFUSION, MANUALLY CONTROLLED INFUSION, AND TOTAL INTRAVENOUS INFUSION FOR ANESTHESIA AND ANALGESIA IN ZOOLOGICAL COLLECTIONS", Proc. Am. Assoc. Zoo. Vet.

Fontenot, D. 2012. "Megavertebrate anesthesia". Proc. Exotic Animal Medicine for the Clinical Practitioner. pp. 63-76.

Fontenot, D. 2011. "Primate restraint and anesthesia". Proc. Exotic Animal Medicine for the Clinical Practitioner. pp. 19-24.

Fontenot, D. 2010. "Making your practice ready for zoo and wildlife medicine". Proc. Exotic Animal Medicine for the Clinical Practitioner. pp. 1-5.

Fontenot, D. 2010. "Parasite control strategies in hoofstock species", Proc. Exotic Animal Medicine for the Clinical Practitioner. pp. 36-41.

Miller M, Weber M, Valdes EV, Neiffer D, **Fontenot D**, Fleming G, Stetter M. 2010. Changes in serum calcium, phosphorus, and magnesium levels in captive ruminants affected by diet manipulation. *J Zoo Wildl Med*; (2010) ; 41; 3: pp.404-408

Fontenot, D. 2009. "Primate restraint and anesthesia". Proc. Exotic Animal Medicine for the Clinical Practitioner. pp. 1-8

Fontenot, D. 2009. "Carnivore restraint and anesthesia". Proc. Exotic Animal Medicine for the Clinical Practitioner. pp. 12-16.

Kinney-Moscona, Allyson , **Fontenot, Deidre K.**, Oosterhius, James E., Ball, Ray L. Burton, Micheal S., Olsen, John H, and Miller, James E. 2009. VARIATIONS IN GASTROINTESTINAL PARASITES IN MULTIPLE HOOFSTOCK SPECIES IN DIFFERENT ZOOLOGICAL FACILITIES", Proc Am Assoc Zoo Vet;(2009);2009;0:121.

Fontenot, D. 2008. "Guam Rail Recovery Program: Management implications for medical husbandry on the mainland". Proc. Amer. Assoc. Zoo. Vet. p. 202.

Fontenot, D. Kaplan, , Ray M., Miller, James. 2006. "DIAGNOSTIC STRATEGIES FOR MONITORING STRONGYLE POPULATIONS IN EXOTIC HOOFSTOCK SPECIES IN DISNEY'S ® ANIMAL KINGDOM COLLECTIONS", Proc Am Assoc Zoo Vet;(2006);2006;0:262-262

Fontenot, D. 2005. "Guam Rail Recovery Program: Management implications for medical husbandry on the mainland". Proc. Amer. Zoo. Aquar. Assoc.

Fontenot, DK, Terrell, SP, Malakooti, K, Medina, S. 2004. Health Assessment of the In Situ Guam Rail. Proc. Am. Assoc. Zoo. Vet. p. 564.

Neiffer, DL, Miller, MA, Weber, M, Stetter, M, **Fontenot, DK,** Robbins, PK, Pye, GW. 2005. Standing Sedation in African Elephants (*Loxodonta Africana*) using Detomidine- Butorphanol Combinations. *J Zoo Wildl Med* Volume 36, Number 2, pp.250-256.

Wilson, H, **Fontenot, DK,** Brown, CA, Kling, M, Stedman, N, Greenacre, CB. 2004. Pseudocarcinomatous Biliary Hyperplasia in Two Green Iguanas. *J. Herp. Med. Surg.* Volume 14, No. 4, p. 12- 18.

Gregory, C, Latimer, K, **Fontenot, DK,** Lamberski, N. 2004. Chronic Monocytic Leukemia in an Inland Bearded Dragon, *Pogona vitticeps*. *J. Herp. Med. Surg.* Volume 14, No. 2, p. 12- 16.

Terrell, SP, **Fontenot, D,** Miller, M, Weber, M. 2004. Chylous Ascites in A Cheetah (*Acinonyx jubatus*) with Venous Occlusive Liver Disease. *J. Zoo. Wildl. Med.* 34 (4): 380- 384.

Gardner, A., Thompson, MS, Heard, DJ, **Fontenot, D,** Gibson, Nicole. 2004. Radiographic Evaluation of Cardiac Size in flying fox species (*Pteropus rodricensus*, *P. hypomelanus*, *P. vampyrus*), Proc. Am. Assoc. Zoo. Vet.

Miller, M., Weber, M., Neiffer, D., Mangold, B., Fontenot, D., Stetter, M. 2003. "Anesthetic Induction of Captive Tigers (*Panthera tigris*) Using a Medetomidine- Ketamine Combination". *J. Zoo. Wild. Med.* 34 (3): 307- 308.

Fontenot, D., Terrell, S., Neiffer, D., Miller, M., Weber, M., Robbins, P., Pye, G., Stetter, M. 2002. "Clinical Trial of a Depot Form of Levonorgestrel (LNG) in Domestic Turkeys (*Meleagris gallopavo*)", *Proc. Assoc. Avian Vet.* Session # 2020.

Fontenot, D., Gregory, C., Lamberski, N. 1998. " Retrospective study of renal disease in black howler monkeys (*Alouatta caraya*) at Riverbanks Zoological Park and Botanical Gardens", *Proc. Amer. Assoc. Zoo. Vet.* p.184.

Wilson, G. H., Fontenot, D., Greenacre, C., Ritchie, B. 1999. "Enteric clostridial colonization in psittacine species", *The Compendium*.

Wilson, G. H., Fontenot, D., Greenacre, C., Ritchie, B. 1999. "Clostridium: Passenger or Pathogen?", *Proc. Assoc. Avian Vet.* Session #8020.

Wilson, G. H., Greenacre, C., Howerth, E., Ambrose, D., Fontenot, D. 1999. "Ascariidosis in a Group of Psittacine Birds", *J. Avian Med. Surg.* 13 (1): 32- 39.

Wilson, G. H., Brown, C. A., Greenacre, C. B., Fontenot, D., Carmichael, K. P. "Suspected Sodium Hypochlorite Toxicosis in a Group of Psittacine Birds". 1999. *J Avian Med Surg* 15 (3): 209-215.

PROFESSIONAL AFFILIATIONS

American Association of Zoo Veterinarians (AAZV)- *member, Education and Member Services committee chair, executive board, EAMCP Scientific chair, Research Committee member/ grant reviewer.*

Association of Avian Veterinarians (AAV)- *member*

Association of Reptile and Amphibian Veterinarians (ARAV)- *member*

International Association of Aquatic Animal Medicine (IAAAM)- *member*

American Association of Zoos and Aquariums (AZA)- *professional fellow, veterinary inspector*

American Veterinary Medical Association (AVMA)- *member*

GRANTS/ AWARDS

- 2014 "PACIFIC AVIFAUNA HEALTH ASSESSMENTS IN GUAM IN COMMONWEALTH OF THE NORTHERN MARIANS ISLANDS", Guest experience Program internal grant/ award, Disney's Animal Programs and Environmental Initiatives, \$15,000
- 2010 "PACIFIC AVIFAUNA HEALTH ASSESSMENTS IN GUAM IN COMMONWEALTH OF THE NORTHERN MARIANS ISLANDS", Cast Conservation Program internal grant/ award, Disney's Animal Programs and Environmental Initiatives, \$60,000 over 3 years
- 2008 Distinguished Service Award, North American Veterinary Conference Session Chair, American Association of Zoo Veterinarians session chair, 2007- 2009
- 2008 AAZV Presidential Service Award
Member Services Chair
- 2008 AAZV Presidential Service Award
Exotic Animal Medicine for the Clinical Practitioner Scientific Chair
- 2008 "HEALTH ASSESSMENT OF IN SITU CAPTIVE GUAM RAIL POPULATION", Cast Conservation Program internal grant/ award, Disney's Animal Programs and Environmental Initiatives, \$16,475
- 2004 "HEALTH ASSESSMENT OF IN SITU CAPTIVE GUAM RAIL POPULATION: Guam Rail Health Assessment #2 and Chicken Disease Survey", Disney's Animal Programs Conservation Action Strategy internal grant/ award, Disney's Animal Programs, \$16,000
- 2003 "HEALTH ASSESSMENT OF IN SITU CAPTIVE GUAM RAIL POPULATION: Guam Rail Health Assessment #1", Disney's Animal Programs Conservation Action Strategy internal grant/ award, Disney's Animal Programs, \$16,000
- 2001 "HEALTH ASSESSMENT OF IN SITU CAPTIVE GUAM RAIL POPULATION: Building relationships and in situ team education", internal grant/ award, Disney's Animal Programs, \$16,530
- 1998 "PHYSIOLOGIC AND CLINICOPATHOLOGICAL NORMALS FOR THE CROCODILE MONITOR (*Varanus salvadorii*)", Association of Reptile and Amphibian Veterinarians, 1997-1998, \$1200
- 1998 AAZV/ Telinject Manuscript Competition Finalist
- 1996 Kaytee Avian and Special Species Scholarship
- 1995 GVMA Alumni Scholarship
Alpha Psi Veterinary Fraternity Senior Honor Officer
- 1992 Who's Who Among American Colleges and Universities
Cum Laude Graduate, University of Georgia
Alpha Zeta Honor Fraternity
Phi Kappa Phi Honor Society
Golden Key National Honor Society

PROFESSIONAL ACTIVITIES

- 2000- current Gruiformes TAG member
 Gruiformes TAG co-vet advisor (rallidae, sun bittern, kagu)
 Guam rail SSP Veterinary Advisor
 Guam rail Recovery Program Veterinary Advisor, Mangilao, GU
 Guam Kingfisher SSP Veterinary advisor
- 2008-2011 Exotic Animal Medicine for the Clinical Practitioner- Program Chair
 AAZV/ ACZM CE program
- 2006-2010 AAZV Executive Committee, ad hoc appointee
- 2006- 2009 AAZV Education Committee
 NAVC session chair for AAZV session
- 2003- 2009 AAZV Member Services Committee, Chair
- 1998-2008 AAZV Education Committee
 Coordinator of Pre- and Post- graduate opportunities
- 1998-current Herp TAG member
- 1992- current member- Alpha Psi Veterinary Social Fraternity

LICENSES

- Florida Veterinary License to practice (Lic#8246- active), federal/ state accreditation
- California Veterinary License to practice (Lic# 13935- inactive), federal/ state accreditation
- Georgia Veterinary License to practice (Lic# 005725- inactive), federal/ state accreditation
- South Carolina Veterinary License to practice (Lic# 1778- inactive), federal/ state accreditation
- Federal and South Carolina/ Florida DEA License (schedule II- IV)

ELIZABETH CHITTICK NOLAN

Disney's Animals, Science, and Environment
PO Box 10,000
Lake Buena Vista, Florida 32830
(407) 938-1911 fax: (407) 938-3266
e-mail: Elizabeth.C.Nolan@Disney.com

EDUCATION

North Carolina State University College of Veterinary Medicine, Raleigh, NC	MSPVM	2001
Tufts University School of Veterinary Medicine, North Grafton, MA	DVM	1995
Haverford College, Haverford, PA	BS	1991

BOARD CERTIFICATION

Diplomate of the American College of Zoological Medicine	2001
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CURRENT POSITION

Operations manager, veterinarian 4/14-present
Department of Animal Health, Disney's Animal Programs, Lake Buena Vista, FL
Management role includes managing the Medical Records manager, Aquatic Animal Health manager, and pathologist, serving as departmental recognition champion, and co-managing the departmental Sharepoint site. Clinical veterinary duties 50% of the time. Contact veterinarian for the Seas, Ranch, Aulani, Castaway Cay teams, and Geriatric Seminar subcommittees. DACWC veterinary representative. Aquatic Animal Working Group member.

PROFESSIONAL EXPERIENCE

TA Director, Department of Animal Health	4/14-6/14
Operations manager, veterinarian	4/09-3/14
Department of Animal Health, Disney's Animal Programs, Lake Buena Vista, FL Management role includes managing three clinical veterinarians and one pathologist, co-managing the UF clinical instructor program, serving as departmental recognition champion, co-managing the preventative health program and departmental Sharepoint site. Clinical veterinary duties 50% of the time. Contact veterinarian for the Seas and CS Mammals teams, DACWC veterinary representative, Main Tank Task Force Fish Health subcommittee chairperson, Geriatric Seminar coordinator.	
Staff veterinarian	11/06-3/09
Department of Animal Health, Disney's Animal Programs, Lake Buena Vista, FL Responsible for veterinary care of Disney's Animal Programs' animals. Contact veterinarian for the Seas with Nemo and Friends, Ko'Olina project, and Castaway Cay (teleosts). Veterinary representative on Disney's Animal Care and Welfare Committee (DACWC). Reviewer for marine DWCF research proposals, 2008 & 2009. Chair of the Main Tank Task Force Fish Health Subcommittee. Co-coordinator of Seas Norms and Commitments meetings, 2008 & 2009. Current clinical research interests in fish nutrition, fish anesthesia, and tiger renal ultrasound.	
Staff veterinarian	10/01-10/06
SeaWorld Orlando/Discovery Cove, Orlando, FL Responsible for veterinary care of oceanarium's animal collection and wildlife rehabilitation programs. Oversaw the veterinary preventative health program, managed the research program for external researchers, and co-chaired the avian influenza response committee.	
Resident in Zoological Medicine, emphasis in aquatic animal medicine	7/98-6/01
North Carolina State University College of Veterinary Medicine, Raleigh, NC	
Interim Head Veterinarian	1/98-6/98
New England Aquarium, Boston, MA Managed department of 10 staff members. Initiated veterinary staff involvement with exhibit development committees. Participated in the search for a new veterinarian.	

Collection Animal Veterinarian New England Aquarium, Boston, MA Responsible for veterinary care of Aquarium's 10,000+ animal collection. Collaborated with husbandry staff and established preventative health programs. Veterinary student program coordinator.	11/96-1/98
Intern in Aquatic Animal Medicine New England Aquarium, Boston, MA	8/96-11/96
Intern in Small Animal Medicine/Surgery MSPCA Angell Memorial Animal Hospital, Jamaica Plain, MA	6/95-7/96

RESEARCH EXPERIENCE

Co-principal Investigator, Wild Fish Nutrition Project, Orlando, Florida Study to evaluate nutrient parameters and nutrition of wild-caught blue stripe grunts.	11/09
Research Assistant, Franciscana Dolphin Project, San Blas, Argentina Provided veterinary assistance for Franciscana dolphin health assessments. Project funded by Disney Wildlife Conservation Fund.	3/07
Clinical Research Assistant, SeaWorld Orlando, Orlando, Florida Assisted external researchers with several clinical research projects involving SeaWorld Orlando collection animals and wild rehabilitation animals, including elasmobranchs, sea turtles, sea lions, manatees, and cetaceans.	12/02-10/06
Research Assistant, Science Event #BG-232, L/V Gould, Antarctica Anesthetized phocids in a NSF-funded, crabeater seal foraging ecology research project.	4/01-6/01
Volunteer Research Assistant, Predator Research Program, Masai Mara River Camp, Kenya Studied prevalence of rabies and transmission in and between domestic and wild carnivore populations.	6/93-8/93

PUBLICATIONS

- Nolan EC and Walsh MT. 2014. Sirenians (manatees and dugongs). *In: West G, Heard D, and Caulkett N (eds.) Zoo Animal and Wildlife Immobilization and Anesthesia, Second Edition.* Blackwell Publishing.
- Colitz CM, Saville WJ, Renner MS, McBain JF, Reidarson TH, Schmitt TL, Nolan EC, Dugan SJ, Knightly F, Rodriguez MM, Mejia-Fava JC, Osborn SD, Clough PL, Collins SP, Osborn BA, Terrell K. 2010. Risk factors associated with cataracts and lens luxations in captive pinnipeds in the United States and the Bahamas. *Journal of the American Veterinary Medical Association* 237(4): 429-436.
- Harvey JW, Harr KE, Murphy D, Walsh MT, Nolan EC, Bonde RK, Pate MG, Deutsch CJ, Edwards HH, Clapp WL. 2009. Hematology of healthy Florida manatees (*Trichechus manatus*). *Veterinary Clinical Pathology* 38(2): 183-193.
- Ruiz CL, Nollens HH, Venn-Watson S, Green LG, Wells RS, Walsh MT, Nolan EC, McBain JF, Jacobson ER. 2009. Baseline circulating immunoglobulin G levels in managed collection and free-ranging bottlenose dolphins (*Tursiops truncatus*). *Developmental and Comparative Immunology* 33(4): 449-55.
- Nolan EC. 2008. The eel and the bartender. *In: Spelman LH and Mashima TY (eds.) The Rhino with Glue-On Shoes: And Other Surprising True Stories of Zoo Vets and Their Patients.* Bantam Dell/Random House, New York: 14-20. (Also published in *Guideposts Magazine* in 2008).
- Chittick EJ and Walsh MT. 2007. Sirenians (manatees and dugongs). *In: West G, Heard D, and Caulkett N (eds.) Zoo Animal and Wildlife Immobilization and Anesthesia.* Blackwell Publishing.
- Harvey JW, Harr KE, Murphy D, Walsh MT, Chittick EJ, Bonde RK, Pate MG, Deutsch CJ, Edwards HH, and Haubold EM. 2007. Clinical biochemistry in healthy manatees (*Trichechus manatus latirostris*). *Journal of Zoo and Wildlife Medicine* 38(2): 269-279.
- Nollens HH, Green LG, Duke D, Walsh MT, Chittick B, Gearhart S, Klein PA, and Jacobson ER. 2007. Development and validation of monoclonal and polyclonal antibodies for the detection of immunoglobulin G of bottlenose dolphins (*Tursiops truncatus*). *Journal of Veterinary Diagnostic Investigation* 19(5): 465-470.
- Gales N, Barnes J, Chittick B, Gray M, Robinson S, Burns J, and Costa D. 2005. Effective, field-based inhalation anesthesia for ice seals. *Marine Mammal Science* 21(4): 717-727.
- Chittick EJ, Olivry T, Dalldorf F, Wright J, Dale BA, and Wolfe BA. 2002. Harlequin ichthyosis in two greater kudu (*Tragelaphus strepsiceros*). *Veterinary Pathology* 39: 751-756.

- Chittick E, Stamper MA, Beasley JF, Lewbart GA, and Horne WA.** 2002. Medetomidine, ketamine, and sevoflurane for anesthesia of injured loggerhead sea turtles: 13 cases (1996-2000). *Journal of the American Veterinary Medical Association* 221: 1019-1025.
- Chittick B and Harms C.** 2001. Intraocular pressure of juvenile loggerhead sea turtles (*Caretta caretta*) in different body positions. *Veterinary Record* 149: 587-589.
- Chittick E, Horne W, Wolfe B, Sladky K, and Loomis M.** 2001. Cardiopulmonary assessment of medetomidine, ketamine, and butorphanol anesthesia in captive Thomson's gazelles (*Gazella thomsoni*). *Journal of Zoo and Wildlife Medicine* 32: 168-175.
- Chittick E, Rotstein D, Brown T, and Wolfe B.** 2001. Pyometra and uterine adenocarcinoma in a melengestrol acetate-implanted captive coati (*Nasua nasua*). *Journal of Zoo and Wildlife Medicine* 32: 245-251.
- Chittick B, Stoskopf M, Law M, Overstreet R, and Levine J.** 2001. Evaluation of potential health risks to eastern elliptio (*Elliptio complanata*) and implications for sympatric endangered freshwater mussel species. *Journal of Aquatic Ecosystem Stress and Recovery* 9: 35-42.
- Chittick B, Stoskopf M, Heil N, Levine J, and Law M.** 2001. Evaluation of *Notropis scepticus* as a surrogate for assessing health risks to the endangered Cape Fear shiner (*Notropis mekistocholas*). *Journal of Aquatic Animal Health* 13: 86-95.

PUBLICATIONS (LIMITED CIRCULATION)

- Nolan EC, Neiffer D, Terrell S, Dias J, Miller A, Piltz J, Odell K, Gonio M, Peccie G, Christman J, Hohne M, Mellen J, and Valdes E.** 2014. Geriatric animal care and end of life decision-making in zoological institutions. *AAZV Proceedings*.
- Nolan EC, Neiffer D, Terrell S, Dias J, Miller A, Piltz J, Odell K, Gonio M, Peccie G, Christman J, Hohne M, Mellen J, and Valdes E.** 2014. Geriatric animal care and end of life decision-making in zoological institutions. *IAAAM Proceedings*.
- Nolan EC, Hoopes LA, and Valdes EV.** 2010. Evaluation of nutrient parameters in wild-caught blue striped grunts (*Haemulon sciurus*) fed aquatic gel diets. *IAAAM Proceedings*. Volume 41.
- Neiffer DL, Nolan EC, and Wilson AB.** 2009. Comparison of three immersion agents (tricaine methanesulfonate, AQUI-S™ (isoeugenol), and eugenol for short duration immobilization of captive southern stingrays (*Dasyatis americana*) from an open water system in the Bahamas. *AAZV Proceedings*, 170.
- Kimbrow J, Nolan EC, Dickson J, Clarkin J, and Martin S.** 2008. Clinical assessment of a coccidian parasite in cuttlefish (*Sepia officinalis*). *IAAAM Proceedings*. Volume 39. Pomezia, 146-147.
- Chittick E, Gearhart S, Dold C, Dalton L, and Walsh M.** 2006. Preliminary findings with butorphanol sedation in cetaceans. *IAAAM Proceedings*, Volume 37. Nassau, 144-145.
- Walsh MT, Chittick E, Gearhart S, Reidarson T, Schmitt T, St. Leger J, Miller R, Coffman T, Betts J, McCoy J, Dalton L, and McBain J.** 2005. Epistaxis in the walrus (*Odeobenus rosmarus*); clinical presentation, diagnostic considerations and potential etiologies. *IAAAM Proceedings*, Volume 36. Seward, 54-57.
- Harr KE, Maners J, Roberts J, Troutman M, Chittick E, Walsh MT, and Rowles T.** 2005. Lack of passive transfer in a neonatal right whale (*Eubalena glacialis*). *IAAAM Proceedings*, Volume 36. Seward, 63-64.
- Eurell TE, Eurell JC, Heller DA, Strano MS, Berzins IK, Walsh MT, Chittick EJ, Adams L, and Toth R.** 2005. Histologic features associated with spinal deformity in captive sand tiger sharks. *IAAAM Proceedings*, Volume 36. Seward, 74-76.
- Walsh MT, Chittick E, Gearhart S, McBain J, Reidarson T, Schmitt T, St. Leger J, Dalton L, Patterson RA, Nollens H, Kerivan J, and Hughes B.** 2005. Development of an *Erysipelothrix rhusiopathiae* vaccination program at Sea World Orlando. *IAAAM Proceedings*, Volume 36. Seward, 135-137.
- Gearhart S, Walsh M, and Chittick B.** 2005. Medical management of peracute *Erysipelothrix rhusiopathiae* septicemia and complications in a *Tursiops truncatus*. *IAAAM Proceedings*, Volume 36. Seward. 138-139.
- Nollens HH, Jacobson ER, Walsh MT, Chittick B, Gearhart S, McBain J, Reidarson T, and Schmitt T.** 2005. Evaluation of the humoral immune response of bottlenose dolphins (*Tursiops truncatus*) to an *Erysipelas* vaccine. *IAAAM Proceedings*, Volume 36. Seward, 140.
- Barnes J, Gales N, Chittick B, and Gray M.** 2005. Effective, field-based inhalation anaesthesia for crabeater seals (*Lobodon carcinophagus*). *Proceedings of the Wildlife Disease Association International Conference*, Cairns, 192.
- Chittick E, Walsh MT, Gearhart S, and McBain J.** 2005. Considerations in management of metabolic abnormalities in a cetacean. *Proceedings of the American Association of Zoo Veterinarians*, American

- Association of Wildlife Veterinarians, and the American Zoo and Aquarium Association Nutrition Advisory Group. Omaha, 111-112.
- Chittick EJ, Walsh MT, Gearhart S, McBain J, Reidarson T, Schmitt T, St. Leger J, Dalton L, Patterson R, Nollens HH, and Stott J.** 2005. An *Erysipelothrix* prevention program in cetaceans. Proceedings of the American Association of Zoo Veterinarians, American Association of Wildlife Veterinarians, and the American Zoo and Aquarium Association Nutrition Advisory Group. Omaha, 113-114.
- Chittick E.** 2005. Basic Fish Surgery I. North American Veterinary Conference Proceedings. Orlando.
- Chittick E.** 2005. Basic Fish Surgery II. North American Veterinary Conference Proceedings. Orlando.
- Chittick E, Walsh M, Gearhart S, and McBain J.** 2003. Preliminary findings in a dolphin *Erysipelothrix* vaccination program. IAAAM Proceedings, Volume 34. Waikoloa, 55.
- Dumonceaux G, Barrie K, Chittick B, and Andrews S.** 2003. Thermokeratoplasty in a captive California sea lion (*Zalophus californianus*). IAAAM Proceedings, Volume 34. Waikoloa, 153.
- Chittick E, Puschner B, Walsh M, Gearhart S, St. Leger J, Skotelas E, and Branch B.** 2002. Blue-green algae microcystin toxicosis in captive Chilean flamingos. 2002 Proceedings of the American Association of Zoo Veterinarians. Milwaukee.
- Chittick E, Lewbart G, and Swanson C.** 2000. Post-anesthetic hypoxemia in freshwater fish. Proceedings of the 31st Annual IAAAM Conference. New Orleans, 372-373.
- Chittick E, Stamper A, Lewbart G, and Horne W.** 2000. Medetomidine, ketamine, and sevoflurane anesthesia in loggerhead sea turtles (*Caretta caretta*). Proceedings of the 31st Annual IAAAM Conference. New Orleans, 61.
- Chittick E, Stamper A, Lewbart G, and Horne W.** 2000. Medetomidine, ketamine, and sevoflurane anesthesia in loggerhead sea turtles (*Caretta caretta*). Annual Sea Turtle Symposium, Orlando, FL.
- Chittick B, Stoskopf M, Law M, and Augspurger T.** 1999. Use of a surrogate freshwater mussel species for health evaluation of the endangered Carolina heelsplitter (*Lasmigona decorata*). Proceedings of the 30th Annual IAAAM Conference. Boston, 108.
- Berzins IK, Jeselson K, Walsh M, Murru F, Chittick B, Mumford S, Martel-Bourbon H, Snyder SB, Richard MJ, Lane H, and Lerner R.** 1998. Kyphoscoliosis in sandtiger sharks. 1998 Proceedings of the AAZV and AAWV Joint Conference. Omaha, 525-526.
- Berzins IK, Jeselson K., Walsh M, Murru F, Chittick B, Mumford S, Martel-Bourbon H, Snyder SB, Richard MJ, Lane H, and Lerner R.** 1998. Preliminary evaluation of spinal deformities in the sandtiger shark (*Odontaspis taurus*). Proceedings of the 29th Annual IAAAM Conference. San Diego, 146-147.
- Ketton DR, Dolphin WF, Chittick EJ, Krum HN, and Merigo CM.** 1998. In vivo imaging correlated with otoacoustic emissions as a metric for ear disease in seals. Proceedings for the Marine Mammal Society Biannual Conference. Monaco.

POSTERS

- Chittick B and Harms C.** 2001. Intraocular pressure of juvenile loggerhead sea turtles (*Caretta caretta*) in different body positions. Annual Sea Turtle Symposium, Philadelphia, PA.

TEACHING/LECTURES/SESSION CHAIRING

- Lecturer, Manatee Rehabilitation Workshop, AAZV Conference, Orlando, October 2014.
- Session Chairperson, Management & Education, IAAAM Conference, Gold Coast Australia, May 2014.
- Lecturer and Workshop Instructor (7 lectures, 2 workshops), Buin Zoo Marine Animal Medicine Congress, Santiago, Chile, March 2014.
- Lecturer, Marine Birds, SeaVet I Course, University of Florida, School of Veterinary Medicine, Orlando, FL, June 2008.
- Lecturer and Laboratory Instructor, Fish Surgery, Advanced Fish Medicine Course, University of Florida, School of Veterinary Medicine, Gainesville, FL, November 2007.
- Lecturer, Marine Mammal Nutrition, SeaVet II Course, University of Florida, School of Veterinary Medicine, Orlando, FL, June 2007.
- Lecturer, Cetacean Physiology and Clinical Medicine, Manatee Physiology and Clinical Medicine, Sea Vet II Course, University of Florida, School of Veterinary Medicine, Orlando, FL, June 2006.
- Interviewee, The Case of the Zany Animal Antics, NASA, 2005.
- Lecturer, Rescue and Rehabilitation of Endangered Marine Animals: The Ins and Outs, University of Florida School of Veterinary Medicine, December 2004.

Lecturer, The Basics of Fish Vitamin Deficiencies, Public Aquarium Marine Fish Health Seminar, Sarasota, FL, November 2004.

Lecturer and Laboratory Instructor, Fish Surgery, Ray Medicine and Surgery, Advanced Fish Medicine Course, University of Florida, School of Veterinary Medicine, Gainesville, FL, March 2003, November 2005.

Public presenter, Sally Ride Science Festival for Girls, Orlando, FL, January 2003; Cocoa, FL, January 2004, 2005.

Assistant Research Professor of Biology, Department of Biology, University of Central Florida, appointment from July 2002 to July 2003.

Lecturer, Complications with Caudal Carapace Fractures in Sea Turtles, Annual Sea Turtle Rehabilitation Workshop, Marathon Key, FL, 2001.

Lecturer, Cetacean and Pinniped Diving Physiology, Marine Mammal Medicine Course, CBS 782, North Carolina State University College of Veterinary Medicine, Center for Marine Sciences and Technology, Morehead City, NC, 2001.

Assistant Course Instructor, Advanced Herptile Medicine Selective, VMC 991R, North Carolina State University College of Veterinary Medicine, Raleigh, NC, 2000.

Lecturer, Cetacean and Pinniped Viral Diseases, Cetacean and Pinniped Parasitic Diseases, Marine Mammal Medicine Selective, VMC 891, North Carolina State University College of Veterinary Medicine, Raleigh, NC, 2000.

Research Forum Participant, North Carolina State University College of Veterinary Medicine, Raleigh, NC, March 1999, April 2000.

Clinical instruction of veterinary students on avian and zoo rotations, North Carolina State University College of Veterinary Medicine, Raleigh, NC, 1998-present.

Moderator for "H.R. in the Hot Zone." AZA 1998 Eastern Regional Conference Program, Boston, April 22-25, 1998, p. 20.

PROFESSIONAL ORGANIZATIONS

Association of Zoos and Aquariums	2014-present
Working Group for Marine Mammal Unusual Mortality Events, appointed position	2012-present
Florida Veterinary Medical Association	2006-2010
Manatee Rehabilitation Partnership, Disney Veterinary Representative	2002-present
Member 2002-present, Veterinary Group Chair 2009, Veterinary Group Interim Chair 2013	
American College of Zoological Medicine	2001-present
Board Examination Committee, Member 2004-present, Aquatics Section Chair 2006-present	
Association of Reptile and Amphibian Veterinarians	2001-2012
American Fisheries Society	1999-2010
International Association of Aquatic Animal Medicine	1998-present
American Association of Zoo Veterinarians	1997-present
American Veterinary Medical Association	1995-present

AWARDS/HONORS

Whooping Crane Award--December, Department of Animal Health	2013
American College of Zoological Medicine Presidential Award	2009
American College of Zoological Medicine Exceptional Merit Award	2002
SeaWorld Orlando Crew Member of the Month--October	2002
Award for Academic Distinction, Tufts University School of Veterinary Medicine	1995
Franklin M. Loew Book Award	1995
Alpha Beta Chapter of the Society of Phi Zeta	1994
Phi Beta Kappa	1991
Varsity Athletic Award	1991

OTHER

Current veterinary licensure in Massachusetts and Florida.

PADI scuba certification, 2001.

Curriculum Vitae

Ryan S. De Voe

Personal Information

Birthdate: June 7, 1972
Address: 642 Alfani Street, Davenport, FL 22896
Phone: 336-301-4409 (C)
Email: ryan.s.de.voe@disney.com, drrsdevoe@gmail.com

Education

Master of Specialized Veterinary Medicine. 2004. College of Veterinary Medicine, North Carolina State University. Raleigh, North Carolina.

Doctor of Veterinary Medicine. 1999. College of Veterinary Medicine, Oregon State University. Corvallis, Oregon.

Bachelor of Science. 1995. Willamette University. Salem, Oregon.

Post Graduate Training/Employment

Veterinarian. June 2014-present. Disney's Animal Kingdom. Lake Buena Vista, FL.

Consulting Veterinarian. June 2013-present. Idexx Laboratories. Clackamas, OR.

Senior Veterinarian. July 2005-June 2014. North Carolina Zoological Park. Asheboro, North Carolina.

Contract Veterinarian. September 2012-June 2014. Greensboro Science Center. Greensboro, North Carolina.

Associate Veterinarian. 2004-2005. Dallas Zoo. Dallas, Texas.

Residency in Zoological Medicine. 2001-2004. North Carolina State University College of Veterinary Medicine. Raleigh, North Carolina.

Internship in Exotic/Zoological Animal Medicine. 2000-2001. College of Veterinary Medicine, University of Georgia. Athens, Georgia.

Associate Veterinarian. 1999-2000. Highland Veterinary Hospital. Redmond, Oregon.

Board Certification

Diplomate of the American College of Zoological Medicine. 2004.

Diplomate of the American Board of Veterinary Practitioners (Avian Practice). 2004.

Diplomate of the American Board of Veterinary Practitioners (Reptile and Amphibian Practice). 2012

Licensure

North Carolina, #5880
Drug Enforcement Administration Registration

Professional Activities/Associations

Species Survival Plan Veterinarian, Puerto Rican Crested Toad: 2004-present

Adjunct Professor of Zoological Medicine. North Carolina State University, College of Veterinary Medicine: 2005-Present.

North Carolina Zoological Park Institutional Animal Care and Use Committee:2006-present

American Board of Veterinary Practitioners organizational committee for development of the reptile and amphibian certification exam:2007-2009

American College of Zoological Medicine Examination Committee: 2008-present

Lizard Taxon Advisory Group Veterinarian: 2010-present

Contributor to the Conservation Breeding Specialist Group's publication "A Manual for Control of Infectious Diseases in Amphibian Survival Assurance Colonies and Reintroduction Programs"

American Board of Veterinary Practitioners credentials evaluation committee (reptile and amphibian). 2010-present.

Species Survival Plan Veterinarian, Hamadryas Baboon: 2011-present

Journal Editing and Peer Review

Journal of Herpetological Medicine and Surgery (Associate editor)

Journal of Zoo and Wildlife Medicine

Journal of Avian Medicine and Surgery

Veterinary Record

Journal of Exotic Pet Medicine

Publications (Peer-reviewed)

Dombrowski DS, De Voe RS, Lewbart GA. Comparison of isoflurane and carbon dioxide anesthesia in Chilean rose-haired tarantulas (*Grammostola rosea*). *Zoo Biol.* 2012;00:1-6.

Stringer EM, De Voe RS, Linder K, Troan B, McCalla-Martin A, Loomis MK. Vesiculobullous skin reaction temporally related to firocoxib treatment in a white rhinoceros (*Ceratotherium simum*). *J Zoo Wildl Med.* 2012;43(1):186-189.

Clarke EO, De Voe RS. Ovariohysterectomy of three vampire bats (*Desmodus rotundus*). *J Zoo Wildl Med.* 2011;42(4):755-758.

Ardente A, Chinnadurai SK, De Voe RS, Stringer EM, Webb T, Ireland J, Saler K. Relationship between gastrointestinal transit time and anesthetic fasting protocols in the captive chimpanzee (*Pan troglodytes*). *J of Med Primatology.* 2011;40(3):181-187.

Stringer EM, De Voe RS, Loomis MR. Suspected anaphylaxis to leuprolide acetate depot in two elf owls (*Micathene whitneyi*). *J Zoo Wildl Med.* 2011;42(1):166-168.

Anderson ET, Troan BV, Stringer EM, Chinnadurai SK, De Voe RS. Cerebral xanthoma in a long-nosed snake (*Rhinocheilus lecontei*). *J Herp Med Surg.* 2010;20(2/3):58-60.

Stringer EM, De Voe RS, Valea F, Toma S, Mulvaney G, Pruitt A, Troan B, Loomis MR. Medical and surgical management of reproductive neoplasia in two western lowland gorillas (*Gorilla gorilla gorilla*). *J Med Primatology.* 2010;39(5):328-335.

Chinnadurai SK, De Voe RS, Koenig A, Gadsen N, Ardente A, Hernandez-Divers SJ. Comparison of an implantable telemetry device and an oscillometric monitor for measurement of blood pressure in anesthetized and unrestrained green iguanas (*Iguana iguana*). *Vet Anes Analgesia.* 2010;37(5):434-439.

Chinnadurai SK, Spodnick G, Degernes L, De Voe RS, Marcellin-Little DJ. Use of an extracapsular stabilization technique to repair cruciate ligament rupture in two avian species. *J Av Med Surg*. 2009;23(4):307-313.

Chinnadurai SK, De Voe RS. Diagnosis, management, and possible etiology of a transcolonic membrane in a Savannah monitor, *Varanus exanthematicus*. *J Herp Med Surg*. 2008;18(3/4):123-126.

Chinnadurai SK, Troan BV, Wolfe KN, De Voe RS, Huijsmans CJJ, Hermans MHA, Wever PC. Septicemia, endocarditis, and cerebral infarction due to *Staphylococcus aureus* in a harp seal (*Phoca groenlandica*). *J Zoo Wildl Med*. 2009;40(2):393-397.

Chinnadurai SK, Wrenn A, De Voe RS. Evaluation of noninvasive oscillometric blood pressure monitoring in anesthetized boid snakes. *JAVMA*. 2009;234(5):625-630.

Chinnadurai SK, Van Wetter A, Linder KE, Harms CA, De Voe RS. Secondary amyloidosis and renal failure in a captive California sea lion (*Zalophus californianus*). *J Zoo Wildl Med*. 2008;39(2):274-278.

Troan BV, Perelygina L, Patrusheva I, Van Wettere AJ, Hilliard JK, Loomis MR, De Voe RS. Naturally transmitted herpesvirus papio-2 infection in a black and white colobus monkey. *JAVMA*. 2007;231(12):1878-1883.

Haag KH, Greenacre CB, De Voe RS, Ambrose D. Nematodes of the subfamily Splendidofilarinae in the subcutis and coelomic cavity of a large day gecko (*Phelsuma madagascariensis grandis*). *J Herp Med Surg*. 2005;15(2):27-30.

De Voe RS, Geissler K, Elmore S, et al. Ranavirus-associated morbidity and mortality in a group of captive eastern box turtles (*Terrapene carolina carolina*). *J Zoo Wildl Med*. 2004;35(4):534-543.

De Voe RS, Spaulding KA, Rotstein J, Rotstein DS. Urinary bladder incarceration and infarction by an intra-abdominal fat pad in a Virginia opossum (*Didelphis virginiana*). *Vet Rad Ultrasound*. 2004;45(4):312-314.

De Voe RS, Trogdon M, Flammer K. Preliminary assessment of the effect of diet and L-carnitine supplementation on lipoma size and bodyweight in budgerigars (*Melopsittacus undulatus*). *J Av Med Surg*. 2004;18(1):12-18.

De Voe RS, Degernes LA, Karli K. Dysplastic koilin causing proventricular obstruction in an eclectus parrot (*Eclectus roratus*). *J Av Med Surg*. 2003;7(1):27-32.

Juopperi T, Karli K, De Voe R, Grindem C. Granulomatous dermatitis in a spade foot toad (*Scaphiopus holbrookii*). *Vet Clin Path*. 2002;31(3):137-139.

De Voe RS, Pack L, Greenacre CB. Radiographic and CT imaging of a skull associated osteoma in a ferret. *Vet Rad Ultrasound*. 2002;43(4):346-348.

Book Chapters

De Voe RS. Amphibian and reptilian anatomy and physiology. In: Colville T, Bassett J. (eds) *Clinical anatomy and physiology for veterinary technicians*. Mosby Elsevier, St. Louis MO. 2008:455-477.

Publications (non-peer reviewed)

Stoskopf MK, Brown J, De Voe RS. Imaging in Zoological Medicine Practice. *Journal of Nursing Radiology*. 2012;3(1):TBA

Alpi KM, Stringer EM, De Voe RS, Stoskopf M. Clinical and research searching on the wild side: exploring the veterinary literature. *J Med Libr Assoc*. 2009;97(3):169-177.

Chinnadurai SK, De Voe RS. Selected infectious diseases of reptiles. *Veterinary Clinics of North America*. 2009;12(3):583-596.

De Voe RS. Captive invertebrate nutrition. *Veterinary Clinics of North America*. 2009;12(2):349-360.

Dombrowski D, De Voe RS. Emergency care of invertebrates. *Veterinary Clinics of North America*. 2007;10(2):621-645.

De Voe RS, Krebs J. Developing new amphibian quarantine standards and pre-release screening protocols. *AZA Connect*. Feb. 2007;26-29.

De Voe RS. Understanding west Nile virus. *Pet Age*. 2002;31(9):56-58.

De Voe RS. Clinical snapshot #4: Anorexia and depression in a guinea pig. *Compend Cont Educ Pract Vet*. 2001;23(6):543.

Proceedings/Conference Presentations

*De Voe RS, Clarke EO, Shaub H. Development of temperature guidelines for shipment of reptile and amphibians. *Proc of ARAV Annual Conf*. 2012.

*De Voe RS, McMullen R, Loomis M. Bilateral cataract removal in an African elephant (*Loxodonta africana*). *Proc Amer Assoc Zoo Veterinarians Annual Conf*. 2012.

*De Voe RS, Dombrowski D, Lewbart G. Comparison of isoflurane and carbon dioxide anesthesia in rose-haired tarantulas (*Grammostola rosea*). *Proc Amer Assoc Zoo Veterinarians Annual Conf*. 2006;240.

*De Voe RS, Trogdon M, Flammer K. Attempted therapy of subcutaneous lipomas in budgerigars (*Melopsittacus undulatus*) using diet modification and L-carnitine supplementation. *Proc of the Crissey Zoological Nutrition Symposium*. 2003:69-70.

*De Voe RS, Trogdon M, Flammer K. Diet modification and L-carnitine supplementation in lipomatous budgerigars. *Proc AAV Annual Conf*. 2003:161-163.

*De Voe RS. Hospital management of the avian patient. *Proc of the NC Vet Tech Assoc Annual Conf*. 2003.

Ades G, Fernando N, Bonner B, Buhlman K, Flanagan J, Innis C, Lewbart G, De Voe R, Lowe M, Lung N, Hudson R, Ross A, Raphael B, Calle P, Senneke D, Tabaka C. A preliminary review of the medical care provided during the December 2001 Asian turtle confiscation. *Proc IAAAM Annual Conf*. 2002;33:79-82.

Govett P, Rotstein D, Reynolds T, Cullen J, Flowers J, Levy M, De Voe R, Boylan S, Lewbart G. Gross, histopathologic, and parasitology findings from confiscated Asian box turtles (*Cuora amboinensis*). *Proc IAAAM Annual Conf*. 2002;33:77-78.

Deresiensi D, Buckler K, Cain D, Drummond A, De Voe R, Kishimori J, Lewbart G. Medical and surgical management of the debilitated Malaysian giant river turtle. (*Orlitia borneensis*). *Proc IAAAM Annual Conf*. 2002;33:75-76.

*De Voe RS. The herptile cloaca: anatomy, function and disease. *Proc ARAV Annual Conf*. 2002:127-130.

*De Voe RS, Degernes L, Karli K. Dysplastic koilin causing obstruction in an eclectus parrot (*Eclectus roratus*). *Proc AAV Annual Conf*. 2002:19-22.

*De Voe RS, Flammer K, Degernes L, Burkhard M. Blood lactate: potential applications in avian medicine. *Proc AAV Annual Conf*. 2002:19-22.

*De Voe RS, Greenacre CB, Ritchie BW, Wilson GH. Surgical management of a cloacal and urinary bladder prolapse in an African bullfrog. Proc Amer Assoc Zoo Veterinarians Annual Conf. 2001:95-97.

*Indicates presentation delivered at meeting.

Residents Trained

Bob MacLean (general zoo focus). 2005-2006. Currently Head Veterinarian at the Audubon Nature Institute.

Allison Tuttle (aquatic focus). 2005-2007. Currently Staff Veterinarian and Director of Animal Care at the Mystic Aquarium, Mystic CT. Board certified in zoological medicine.

Karen Wolf (general zoo focus). 2005-2008. Currently Head Veterinarian at the Point Defiance Zoo, Tacoma Washington. Board certified in zoological medicine.

Sathya Chinnadurai (general zoo focus). 2006-2009. Currently Clinical Professor of Zoological Medicine at the University of California (Davis)/Staff Veterinarian Sacramento Zoo. Board certified in zoological medicine and anesthesiology.

Eric Anderson (aquatic focus). 2007-2010. Board certified in zoological Medicine.

Betsy Stringer (general zoo focus). 2008-2011. Currently associate veterinarian at the Denver Zoo, Denver CO. Board certified in zoological medicine.

Tres Clarke (aquatic focus). 2009-2012. Currently associate veterinarian at the Aquarium of the Americas, New Orleans, LA.

Teaching Experience

VMC 989. Zoological Medicine. North Carolina Zoological Park/North Carolina State University, College of Veterinary Medicine. Supervise a four week block in zoological medicine at the North Carolina Zoo. Estimated 12-15 students/year. 2005-present.

VMC 964. Zoo Animal Husbandry and Nutrition. North Carolina Zoological Park/North Carolina State University, College of Veterinary Medicine. Supervise a two week block in captive wild animal husbandry and nutrition at the North Carolina Zoo. Estimated 10-12 students/year. 2009-present.

VMC 998. Wildlife Rehabilitation Medicine. North Carolina Zoological Park/North Carolina State University, College of Veterinary Medicine. Supervise a two week block in clinical wildlife rehabilitation medicine for senior veterinary students at the Valerie H. Schindler Wildlife Rehabilitation Center (located at the NC Zoo). Estimated 10-12 students/year. 2005-present.

CBS 816/817, Advanced Topics in Zoological Medicine. North Carolina State University, College of Veterinary Medicine, Raleigh NC. Deliver 2-4 zoological medicine focused seminars to residents, graduate/veterinary students and faculty each year. 2005-present.

VMC 991 Reptile and Amphibian Medicine Selective. North Carolina State University, College of Veterinary Medicine, Raleigh NC. Course coordinator and lecturer. One week, intensive course in herptile medicine, including a wet lab in which students perform gonadectomy surgeries on both male and female green iguanas and bearded dragons. Course is offered every other year. 2004-present.

Amphibian Medicine Wet Lab. Association of Reptile and Amphibian Veterinarians Annual Conference. Co-taught with Dr. Kevin Wright, Arizona Exotic Animal Hospital. 2012 & 2010. Seattle, WA.

American Board of Veterinary Practitioners Annual Symposium. Delivered 6 hours of lectures.
Amphibian Husbandry

Reptile Cardiovascular Anatomy and Physiology
Herptile Parasitology
Insectivorous Reptile Nutrition and Diseases
Mechanics of Snake Reproduction
Reproductive Diseases of Squamate Reptiles

2011. St. Louis, MO.

Continuing Education Seminar in Wild and Zoo Animal Medicine. National Autonomous University of Mexico School of Veterinary Medicine and Animal Husbandry. Delivered 5 hours of lectures.

Conservation of the Puerto Rican Crested Toad
Invertebrate Husbandry and Diagnostic Techniques
Ectotherm Anesthesia
Reproductive Diseases of Squamate Reptiles
Insectivorous Reptile Nutrition and Diseases

Conference for Veterinary Care. Delivered 9 hours of lectures.

Amphibian Husbandry
Reptile Cardiovascular Anatomy and Physiology
Herptile Parasitology
Insectivorous Reptile Nutrition and Diseases
Reproductive Diseases of Squamate Reptiles
Veterinary Management of the Small Avian Patient
Invertebrate Husbandry and Diagnostic Techniques
Invertebrate Anesthesia
Zoonotic Diseases of Primates

2010. San Diego, CA.

Exotic Animal Medicine for the Private Practitioner. AAZV Annual Conference. Delivered 3 hours of lectures.

Invertebrate Husbandry and Diagnostic Techniques
Reproductive Diseases of Squamate Reptiles
Insectivorous Reptile Nutrition and Diseases

2009. Tulsa, OK.

American College of Zoological Medicine exam preparation short course. Lectures on a variety of subjects pertaining to zoological medicine. June 2008, 2010, 2012. Raleigh, NC.

***Additional teaching experience descriptions available on request.**

Workshops/Courses

Managing Effective Performance: situational leadership. 2012. North Carolina Office of State Personnel, Raleigh, NC.

International workshop on captive elephant and rhinoceros reproduction. 2006. African Lion Safari, Cambridge, Ontario.

Avian Egg Incubation Workshop. 2005. Dallas Zoo, Dallas, TX.

Fish Health Management Short Course. 2003. College of Veterinary Medicine, North Carolina State University, Raleigh, NC.

ASPCA Animal Poison Control Center Toxicology Short Course for Wildlife Professionals. 2003. North Carolina Zoological Park, Asheboro, NC.

Honors/Awards

Dr. EE Wedman Outstanding Senior Award. 1999. Oregon State University.

Hayden and Sandy Sears Companion Animal Award for compassionate service to animals and their owners. 1999. Oregon State University.

Auxillary to the American Veterinary Medical Association Award for outstanding achievements that brought recognition to Oregon State University. 1999. Oregon State University.

Class of 1998 Exotic Animal Medicine Scholarship. 1999. Oregon State University.

American College of Veterinary Radiology Award. 1999. Oregon State University.

Merck Manual Award. 1999. Oregon State University.

Nomination and induction into the Alpha Gamma chapter of Phi Zeta. 1998. Oregon State University.

Professional References

Keven Flammer, DVM, DABVP-Avian. Professor of Companion and Wild Avian Medicine/Acting Associate Dean and Director of Academic Affairs, College of Veterinary Medicine, North Carolina State University, 4700 Hillsborough St., Raleigh, NC 27606. 919-513-6212. Keven_Flammer@ncsu.edu.

Michael Stoskopf, DVM, PhD, DACZM. Director of the Environmental Medicine Consortium/Professor of Wildlife and Aquatic Medicine, College of Veterinary Medicine, North Carolina State University, 4700 Hillsborough St., Raleigh, NC 27606. 919-513-6524. Michael_Stoskopf@ncsu.edu

Mike Loomis, MA, DVM, DACZM. Chief Veterinarian, North Carolina Zoological Park. 4401 Zoo Parkway, Asheboro, NC 27205. 336-879-7631. Mike.Loomis@nczoo.org.

Sathya Chinnadurai, MS, DVM, DACZM, DACVA. Clinical Professor of Zoological Medicine, University of California at Davis, One Shields Avenue, Davis, CA 95616. 919-357-8924.

Natalie H. Hall, D.V.M., Dipl. A.C.Z.M.
Curriculum Vitae (continued)

- Melbourne Veterinary Hospital, Melbourne, FL (primarily) and Port St. John Veterinary Hospital, Port St. John, FL
Employer: Paul Burger, DVM
Full-Time Associate Veterinarian and Staff Manager, January 2004 to August 2007
 - Initially worked as sole practitioner and expanded clientele to support 2 ½ doctors on staff
 - Primary support staff manager including staff hiring, education, and training
 - Hospital equipment included CO₂ laser, MetRx videoscope, digital radiology, and ultrasound
 - Surgical experience included gastrotomies/enterotomies, caesarians, splenectomies, cystotomies, urethrostomies, enucleations, cherry eye repairs, orthopedics, et al.
 - Instituted senior pet program with over 80% acceptance rate by clients
 - Transitioned hospital to a 3-year vaccine protocol

- East Coast Animal Medical Center, Vero, FL
Employer: Valerie Biehl, DVM
Relief Veterinarian, January 2006 to January 2007

- South Pointe Animal Hospital, Augusta, GA
Employer: Janet E. Distler, DVM
Full-Time Associate Veterinarian May 2002 to October 2003

- Equine Ambulatory Practice, Augusta, GA
Employer: Margot Greer Boerner, DVM
Relief Veterinarian, Spring 2002 to Fall 2003

V. Publications

V.A. Book Chapters

McRuer, D., and Hall, N. 2012. Chapter 13 Wildlife. In: *Exotic Animal Formulary, 4th edition*. Carpenter, J.W. (ed.), Elsevier, Inc., Philadelphia, Pennsylvania, pp 662-683.

V.B. Primary Authorship in Journal Publications (Peer-Reviewed)

Hall, N., Walsh, M., DeLuca, C., Bukoski, A. 2012. Hysteroscopy and episiotomy in a rescued, cold-stressed Florida manatee (*Trichechus manatus latirostris*) for diagnosis and treatment of a retained fetal skeleton. *Journal of Zoo and Wildlife Medicine* 43(3): 670-673. <http://dx.doi.org/10.1638/2011-0282R1.1>

Hall, N., Isaza, R., Hall, J., Wiedner E., Conrad, B., Wamsley H. 2012. Serum osmolality and effects of water deprivation in captive Asian elephants (*Elephas maximus*). *Journal of Veterinary Diagnostic Investigation* 24(4): 688-695. <http://dx.doi.org/10.1177/1040638712445770>

Hall, N., Archer, L., Childress, A., Wellehan, J. 2012. Identification of a novel adenovirus in a cotton-top tamarin (*Sanguinus oedipus*). *Journal of Veterinary Diagnostic Investigation* 24(2): 359-363. <http://dx.doi.org/10.1177/1040638711435809>

Hall, N., Swinford, A., McRuer, D. and Hall, J. 2011. Survey of haircoat fungal flora for the presence of dermatophytes in a population of white-tailed deer (*Odocoileus virginianus*) in Virginia. *Journal of Wildlife Diseases* 47(3): 713-716. <http://www.jwildlifedis.org/content/47/3/713.abstract>

Hall, N., Conley K., Berry, C., Farina, L., Sigler L., Wellehan, J., Roelrl M., Heard, D. 2011. Computed tomography of granulomatous pneumonia with oxalosis in an American alligator (*Alligator mississippiensis*) associated with *Metarhizium anisopliae* var *anisopliae*. *Journal of Zoo and Wildlife Medicine* 42(4): 700-708. <http://dx.doi.org/10.1638/2011-0027.1>

V.C. Nonprimary Authorship in Journal Publications (Peer-Reviewed)

Erlacher-Reid, C., Gallagher, A., Brock, P., Hall, N. Feb 24, 2012. Use of rigid endoscopy to evaluate vaginal haemorrhage in a rat. *Veterinary Record* doi 10.1136/vr.100494. <http://dx.doi.org/10.1136/vr.100494>

Natalie H. Hall, D.V.M., Dipl. A.C.Z.M.
Curriculum Vitae (continued)

Residency Management Experience:

- Years 1-2 included heavy clinic management responsibilities such as overseeing the daily hospital zoo ward functions with 2 to 4 support staff and 2 to 6 students and participation in ward management meetings
- Developed many zoo ward improvements including
 - Implemented patient discharge instruction templates for over 20 species
 - Created hospital patient treatment sheets for zoological species
 - Developed client pricing packages for privately-owned exotic species
 - Established a functional in-ward student clinical laboratory
 - Revised the resident guidelines with the addition of zoological institution collection guides
 - Updated of emergency phone call triage system and orientation of incoming emergency interns
 - Met with architects to design newly constructed zoo medicine ward

II.B. Internship in Wildlife and Conservation Medicine

The Wildlife Center of Virginia, Waynesboro, VA
Supervisor: Dr. David McRuer, D.V.M., M.Sc., Dipl. A.C.V.P.M.

Clinical Experience:

- Hospital admits roughly 2300 patients per year with an emphasis on birds of prey and is the only facility in Virginia licensed for Bald Eagle rehabilitation
- Facilities include digital radiology, fluoroscopy, endoscopy, laparoscopy, and ultrasonography with in-house clinical pathology and gross necropsy facilities as well as rehabilitation care up to the time of patient release
- Served as primary clinician for day and emergency cases including avian fracture repairs, advanced malnutrition, organophosphate/carbamate toxicity, lead toxicity, carapacial fracture repairs, aural abscesses, and electrocutions

Additional Experience:

- Researched potential for white-tail deer to harbor subclinical dermatophytes with results published in JWD
- Revised in-hospital formulary with results published in Carpenter's Formulary 4th edition
- Directly supervised and taught U.S. and international veterinary students
- Gave guest lectures and hosted wetlabs for the VirginiaTech College of Veterinary Medicine
- Actively participated in public education events, local news interviews, fundraising events, and rehabilitator educational conference

III. Additional Zoological Veterinary Experience

- Zoo Atlanta, Atlanta, GA, December 2007 to May 2008
Relief Veterinarian
- The Brevard Zoo, Melbourne, FL, October 2005 to August 2007
Relief Veterinarian and Volunteer Assistant Veterinarian
- Space and Naval Warfare Systems Center Navy Marine Mammal Lab, San Diego, CA, Summer 2000
Veterinary Student Volunteer
- MarVet, Sarasota, FL, Summer 2000
Veterinary Marine Mammal Medicine Student

IV. Private Practice Experience

- Natalie Hall, DVM, PC, Georgia and Virginia Employer: Self
Relief Veterinarian and Business Owner, September 2007 to July 2009
 - Established a personal corporation to provide relief coverage for small animal private practices
 - Designed a successful marketing campaign including website, brochures, and letters of introduction
 - Completed market surveys to determine appropriate pricing and scheduling
 - Developed a business contract used with hospitals for clarification of work agreement
 - Within two months had full-time workload as highest paid relief veterinarian in the Atlanta area

Natalie H. Hall, D.V.M., Dipl. A.C.Z.M.
Curriculum Vitae (continued)

Year 4 Clinical Experience: Disney's Animal Programs

- Worked as primary clinician for collections at Disney's Animal Kingdom Park, Disney's Animal Kingdom Lodge, and the Seas at Epcot including after-hours emergency cases
- Performed on-show veterinary procedures for guest audience including direct guest interaction and education
- Primary contact veterinarian for wildlife rehabilitation program
- Taught and supervised veterinary externs and undergraduate wildlife interns
- Taught lectures in advanced zoological topics to UF CVM students

Additional Residency Experience:

- Resident research
 - Research focused on the application of serum osmolality in assessment of hydration status in Asian elephants (see publications list below)
 - Project was conducted with the Ringling Bros. and Barnum & Bailey Center for Elephant Conservation, the University of Florida Clinical Pathology Laboratory, and the University of Miami Miller School of Medicine
 - Presented results at the American Association of Zoological Medicine 2011 Conference
 - Awarded Best Resident Platform Research Presentation at the UF CVM 2012 Phi Zeta Day National Conference
- Field experience
 - Kruger National Park, South Africa: Three weeks field work immobilizing rhinos, elephants, and other native wildlife, May-June, 2012
 - Crystal River, FL: Annual manatee captures and health assessments with the Florida Fish and Wildlife Conservation Commission, 2010, 2011, and 2012
 - West Palm Beach, FL: Anesthesia and surgical intracoelomic radiotransmitter placement in mottled ducks for the Florida Fish and Wildlife Conservation Commission, August 2010
 - Portland, ME: Field anesthesia of eiders receiving surgically placed radiotransmitters for the Biodiversity Research Institute, May 2010
- Outside rotations
 - University of Florida Tropical Aquaculture Laboratory, 2011
 - Marine Mammal Pathobiology Laboratory, 2011
 - University of Florida Aquatic Animal Health Department, 2010 and 2011
- Wetlab training
 - Diagnostic laparoscopy techniques (UF CVM Department of Small Animal Internal Medicine)
 - Surgical laparoscopy techniques and ovariectomy (UF CVM Department of Small Animal Surgery)
 - Gastrointestinal endoscopic technology and clinical techniques (UF CVM Department of Small Animal Internal Medicine)
 - Megavertebrate anesthesia (WOCC)

Residency Teaching Experience:

- Co-created and taught a one semester bimonthly course in international conservation medicine with Dr. Copper Aitken-Palmer, D.V.M., Ph.D., that culminated in a two-week hands-on field experience in southeast Asia with charity projects conducted for Clouded Leopard Consortium (Thailand), Khao Keow Zoo (Thailand), Ayutthaya Elephant Stay (Thailand), Cuc Phuong Endangered Primate Rescue Center (Vietnam), Carnivore and Pangolin Conservation Program (Vietnam), Cuc Phuong Turtle Conservation Center (Vietnam), and Animals Asia Moon Bear Rescue Center (Vietnam)
- Initiated and directed a biweekly multi-institutional journal club focused on resident ACZM board preparation
- Acted as primary supervisor and teacher for veterinary students on clinical rotations at UF CVM and WOCC
- Taught advanced level classroom lectures and wetlabs in zoological topics

12. Capture, mark, and release research program on growling grass frogs, *Litoria raniformis* (collaborator).
13. Incidence of feline coronavirus in captive exotic cats in Australia using fecal PCR techniques (collaborator).
14. Characterization and cryopreservation of eastern giant eland semen (primary investigator).
15. Anesthesia of eastern giant eland (co-investigator).
16. The effect of endoscopic salpingohysterectomy in juvenile cockatiels on ovulation (primary investigator). 1998 AAV grant \$8,500
17. Transmission of *Mycoplasma* sp. in alligators, crocodiles, and caimans (co-investigator).
18. Magnetic resonance imaging for lesion localization in psittacines with chronic sinusitis (primary investigator).
19. Propofol as an induction agent for reptilian anesthesia (primary investigator).

AWARDS RECEIVED

- Zooper Hero Award, San Diego Zoo, 2013
- Distinguished Service Award, Association of Avian Veterinarians, 2003

PROFESSIONAL MEMBERSHIPS

- American College of Zoological Medicine
- American Association of Zoo Veterinarians
- American Veterinary Medical Association
- Association of Zoos and Aquariums
- Registered with the Veterinary Surgeons Board of Queensland, Australia
- Registered with the Veterinary Medical Board of California, USA

RELEVANT SKILLS

- Computer literate including use of MedARKS, Word, Excel, and PowerPoint.
- Australian Class C & D Firearm Licences 2002-2005
- Driver's Licence 1984-Present.

REFERENCES

- Available upon request

Natalie H. Hall, D.V.M., Dipl. A.C.Z.M.
Curriculum Vitae (continued)

Quesada, R., Citino S., Easley, J., Hall, N., Brokken, M., Brown, M. 2011. Surgical Resolution of an avulsion fracture of the peroneus tertius origin in a giraffe (*Giraffa camelopardalis reticulata*). *Journal of Zoo and Wildlife Medicine* 42(2): 348-350. <http://dx.doi.org/10.1638/2010-0201.1>

Quesada, R., Heard, D., Aitken-Palmer, C., Hall, N., Conley, K., Childress, A., Wellehan, J. 2011. Detection and phylogenetic characterization of a novel herpesvirus from the trachea of two stranded loons (*Gavia immer*). *Journal of Wildlife Diseases* 47(1): 233-239. <http://www.jwildlifedis.org/content/47/1/233.abstract>

Wunschmann, A., Rejmanek, D., Conrad, P., Hall, N., Cruz-Martinez, L., Vaughn, S., Barr, B. 2010. Natural fatal *Sarcocystis falcatula* infections in free-ranging eagles in North America. *Journal of Veterinary Diagnostic Investigation* 22(2): 282-289. <http://dx.doi.org/10.1177/104063871002200222>

V.D. Conference Presentations

Phi Zeta Day National Conference, 2012, University of Florida College of Veterinary Medicine, Gainesville, FL
Serum Osmolality in the Asian Elephant Awarded Best Resident Platform Presentation

American Association of Zoo Veterinarians Conference, 2011, Kansas City, MO
Serum Osmolality in the Asian Elephant

Association of Reptile and Amphibian Veterinarians Joint Conference with AAZV, 2010, South Padre Island, TX
*Fungal pneumonia due to *Metarhizium anisopliae* in an American alligator*

University of Florida College of Veterinary Medicine Resident Seminar Series, 2009-2011, Gainesville, FL
Comparison of osmoregulatory mechanisms across vertebrate groups
Reptile renal-portal system: Where should I give that injection?
Challenges in Conservation Medicine in Southeast Asia

Call of the Wild Conference for Wildlife Rehabilitators, 2008, Waynesboro, VA
Review of Wound Management Techniques with associated bandaging techniques wetlab

VI. Awards

Presidential Service Award, AAZV, 2012, Oakland, CA
Best Resident Platform Presentation, Phi Zeta Day National Conference, 2012, Gainesville, FL

VII. Professional activities

- Licensing USDA accredited category I and II
Current FL veterinary license (Previously licensed in VA, GA, TN, and TX)
- Associations Active membership: ACZM, ex-officio examination committee member
AAZV, Student Reception Coordinator
AAWV, member
AVMA, member
- Continuing Education AAZV 2007, 2008, 2010, 2011, 2012
NAVC 2006, 2007, 2011, 2013
Giraffe Parasite Control Strategic Workshop, 2007, Orlando, FL
Southwest Veterinary Symposium 2002, 2003

VIII. Other activities

- Experienced in international travel
- Accomplished musician
- Open water SCUBA certification and NITROX certification

IX. References available upon request.

Natalie D. Mylniczenko, MS, DVM, Dipl ACZM
3325 Butler Bay Dr. North, Windermere, Florida 34786
(321) 299-4079 natalie.mylniczenko@disney.com

Curriculum Vitae

Education

2008 Board certification, the American College of Zoological Medicine
2000 Veterinary Internship: Zoological Medicine, Lincoln Park Zoo, Chicago, Illinois
1999 Doctor of Veterinary Medicine, University of Illinois, Urbana, Illinois.
1999 Master of Science, Veterinary Pathobiology, University of Illinois, Urbana, Illinois.
1996 Bachelor of Science, Veterinary Sciences with Honors, University of Illinois, Urbana, Illinois.
1993 Bachelor of Science, Biology, with High Distinction, University of Illinois, Chicago, Illinois.

Work experience

Aug 2009 to present

Staff Veterinarian

Disney's Animal Kingdom, Walt Disney World Resorts

Lake Buena Vista, Florida

Clinical veterinarian for a large collection of zoo and aquatic animals. Mentor in the zoological residency program at the University of Florida. Attending veterinarian, GRACE (Gorilla Rehabilitation and Education center, DRC, Congo)

2004-Oct to 2009-Jul

Associate Veterinarian

Brookfield Zoo, Brookfield, Illinois

Clinical veterinarian for a large collection of zoo and aquatic animals. Supervisor of hospital keepers (until Sep 2007) and the environmental quality specialist. Active participant in the zoological residency program.

2003-Jan to 2009

Adjunct Clinical Assistant Professor

University of Illinois, College of Veterinary Medicine, Department of Veterinary Clinical Medicine

2002-May to 2004-Sep

Senior Veterinarian

John G. Shedd Aquarium, Chicago, Illinois

Primary clinician for a large collection of aquatic and terrestrial animals. Supervisor of veterinary interns, veterinary students, and the manager of veterinary technical staff. Assisted in establishing joint residency program with Brookfield Zoo and Lincoln Park Zoo.

2001-Jan to 2002-Apr

Staff Veterinarian

Lincoln Park Zoological Gardens, Chicago, Illinois

Responsible for daily clinical duties, nutrition, and maintaining the zoo collection's preventative health program. Presented workshops and lectures for zoo staff. Assisted in supervising veterinary student externs.

2000-Jan to 2000-Dec

Lester E Fisher Veterinary Intern: Zoological Medicine

Lincoln Park Zoological Gardens, Chicago, Illinois

Was responsible for clinical case management of the zoo's collection, assisted in a preventative health care program.

1999-Jun to 1999-Dec

Veterinary Intern: Small Animal Medicine and Surgery

Auburn University College of Veterinary Medicine, Auburn, Alabama

Primary clinician in small animal veterinary services including emergency duties. Presented topics at clinical rounds. Was responsible for wildlife and exotic animal patients. Supervised fourth year veterinary students in case management.

1999-Jun

Relief Veterinarian

All Creatures Animal Hospital, Urbana, Illinois

Participated in medical and surgical case management in a small and exotic animal practice.

1999-Mar to 1999-Apr

Veterinary Preceptorship

Lincoln Park Zoo, Chicago, Illinois

1998-Aug to 1998-Sep

Veterinary Preceptorship

Milwaukee County Zoo, Milwaukee, Wisconsin

1997-Aug to 1997-Dec

Veterinary/Laboratory Externship

John G. Shedd Aquarium, Chicago, Illinois

Volunteer experience

1999-Jul to 1999-Dec

Southeastern Raptor Rehabilitation Center, Auburn, Alabama

Responsible for surgical and medical management of native raptors. Prepared wet laboratories in basic raptor medicine for local clinicians, rehabilitators, and veterinary students.

1995 to 1998

Wildlife Medical Clinic, University of Illinois at Champaign-Urbana

Participated in rehabilitation, triage, neonatal care, medical care, and community education involving state and federal wildlife.

1997 to 2001

Laboratory/Veterinary Department, John G. Shedd Aquarium, Chicago, Illinois

Assisted with animal treatments and medical care. Organized multiple projects. Relief veterinarian.

1993 to 1995

Elkhorn Veterinary Clinic, Elkhorn, Wisconsin
Assistant veterinary technician.

1988 to 1991

John G. Shedd Aquarium, Chicago, Illinois

Education Department. Taught classes and gave presentations on aquatic life.

Laboratory Department. Assisted in medical care, maintained water quality, and performed necropsies.

Related experience

1995 to 1998

University of Illinois, Urbana, Illinois

Research Assistant

ELISA, immunohistochemistry, and RT-PCR.

1994 to 1995

University of Illinois, Chicago

Research Assistant

Cell culturing, RNA preparations, and Northern analysis.

1990 to 1993

University of Illinois, Chicago

Molecular Biology Laboratory Aide

Postgraduate continuing education

2013 NAVC institute, Ultrasonography Course (scheduled)

2012 American Association of Zoo Veterinarians Conference, Oakland, CA

2011 International Association of Aquatic Animal Veterinarians, Las Vegas, NV

2009 American Association of Zoo Veterinarians, Annual Conference, Tulsa, OK
Session chair, Aquatics

2008 International Association of Aquatic Animal Veterinarians, Pomezia, Italy

American Association of Zoo Veterinarians, Annual Conference, Los Angeles, California

2007 Association of Reptile and Amphibian Veterinarians Conference, New Orleans, Louisiana

2006 ACZM short course, University of California, Davis, CA

Dolphin Reproductive Workshop

International Association of Aquatic Animal Veterinarians, Annual Conference, Nassau, Bahamas

American Association of Zoo Veterinarians, Annual Conference, Tampa, Florida

Manatee medicine workshop

2005 International Association of Aquatic Animal Veterinarians, Seward, Alaska

2004 ACZM short course, University of Wisconsin, Madison, WI

American Association of Zoo Veterinarians, Annual Conference, San Diego, California

2003 American Association of Zoo Veterinarians, Annual Conference, Minneapolis, Minnesota

Primate medicine workshop

2002 American Association of Zoo Veterinarians, Annual Conference, Milwaukee, Wisconsin

Rhinoceros reproduction and ultrasound workshop

- Laser technology workshop
- Anesthetic monitoring workshop
- 2001 American Association of Zoo Veterinarians, Annual Conference, Orlando, Florida
 - Chelonian surgery workshop
- 2000 Association of Reptile and Amphibian Veterinarians, Annual Conference, Reno, Nevada
 - Safe Capture International, Arlington Heights, Illinois
 - Chemical immobilization course
 - Midwest Regional Zoo Veterinarians Winter Conference, Toledo, Ohio
- 1999 American Association of Zoo Veterinarians, Annual Conference, Columbus, Ohio

Scientific and Professional Organizations

- Pan African Sanctuary Alliance, veterinary group
- American Association of Zoo Veterinarians
- American Association of Wildlife Veterinarians
- American Veterinary Medical Association
- American Zoo and Aquarium Association (Professional Associate)
- Association of Avian Veterinarians
- Association of Exotic Mammal Veterinarians
- Association of Reptile and Amphibian Veterinarians
- Wildlife Disease Association

Professional responsibilities

- Attending veterinarian, GRACE (Gorilla Rehabilitation Conservation and Education), Democratic Republic of Congo
- Disney Worldwide Conservation Fund Africa committee 2010-present
- American College of Zoological Medicine Exam Committee 2009-present
- AZA Infectious Disease Committee 2009-present
- AZA health committee member, 2007-present
- Iron Storage Disease in Rhinoceros Workshop participant/committee member, lecturer 2010
- Cetacean fetal monitoring workshop 2009-2012; project manager
- Dolphin Consortium, active member 2005-present
- Research: pharmacokinetics of meloxicam in tilapia, Co-PI (resident research project)
- Research: stingray reproductive disease in captivity
- Research: iron storage syndrome and treatment in rhinoceros, Co-PI. 2012-present.
- 2000-2, 2007-present Gorilla medical health database project, primary (2000) and co-investigator (2007)
 - Obtained an AZA Conservation Endowment Fund Grant with Dennis, P, Murphy, H and Meehan, T. for the continuation of a gorilla medical database project, 2007.
- Dolphin health assessment, volunteer veterinarian, Sarasota, FL, 2006, 2008, 2010, 2011, 2012.
 - Back up veterinarian, Mote marine laboratory 2011-present
- Field research: stress in pelagic elasmobranchs 2004-present
 - assessment of blood values in free range elasmobranchs
 - special interest in transport survivability in pelagic species
 - amelioration of physiologic changes secondary to stress induced by handling

- Reviewer for the Journal of Herpetological Medicine and Surgery, the Journal of Zoological and Wildlife Medicine, the Journal of Aquatic Animal Health and International Zoo yearbook
- Research: fish analgesia-ketoprofen and butorphanol effects and pharmacokinetics, 2003-5
- Veterinary advisor for the Old World Monkey TAG (guenon group 2003 to 2012) and the Marine Mammal TAG.

Honors/Grants

- Cast conservation project grant 2011, 2012 shark stress, Co-PI
- Obtained a \$36,000 grant from the Morris Animal Foundation for the study of analgesics in fish, 2003.
- Schering Plough Senior Veterinary Student Award, 1999.
- Sophie's Veterinary Cardiology Award, 1999.
- Veterinary Medicine Scholars Program (Combined DVM/PhD program), 1995 to 1999.
- Dean's List College of Veterinary Medicine, University of Illinois, 1996, 1997, 1999.
- Representative, University of Illinois Veterinary Ethics Committee; 1995 to 1999 (chairperson 1998).
- Dr. Christopher Moberly Scholarship, 1998.
- Dr. J.E. Salsbury Scholarship, 1998.
- Victor A. Drill Award, Poster Presentation, Society of Toxicology Meeting, 1996.
- University of Illinois College of Veterinary Medicine Certificate of Academic Achievement, 1995 and 1996.

Bibliography

Journal publications

REFEREED:

Mylniczenko, ND, Sullivan, KE, Corcoran, ME, Fleming, GJ, Valdes, VE. 2012 . Management strategies of iron accumulation in a population of black rhinoceros (*Diceros bicornis minor*)
Journal of Zoo and Wildlife Medicine, 43(3s):S83-S91. 2012.

Naples, LM, Mylniczenko, ND, Zachariah, T, Wilborn, R, Young, F, Evaluation of blood gases in wild caught and captive elasmobranchs and the influence of phlebotomy site on ISTAT® clinical analyzer results.
JAVMA, Vol 241, No. 1, July 1, 2012

Jankowski, G, Langan, JN, Adkesson, MJ, Terio, KA, Mylniczenko, ND, Meehan TP, Schmitt, D. 2012.
Dilated Ureters, Renal Dysplasia, and Chronic Renal Failure in an African Elephant (*Loxodonta africana*).
Journal of Zoo and Wildlife Medicine: March 2012, Vol. 43, No. 1, pp. 153-158.

Naples, LM, Langan, JN, Mylniczenko, ND, Kagan, R, Colgrove, K. Islet Cell Tumor in a Savannah Monitor (*Varanus exanthematicus*). Journ Herp Med Surg. Vol 19. Number 4. 2009.

Mylniczenko, ND, Storms, TJ. Pharmacokinetics of Ketoprofen and Butorphanol in Rainbow Trout (*Onchorhynchus mykiss*). In preparation.

Davis, MR, Langan, JN, Mylniczenko, ND, Benson, K, Lamberski, N. and Ramer, J. 2009. Colonic Obstruction in three captive reticulated giraffe (*Giraffa camelopardis reticulata*). *Journal of Zoo and Wildlife Medicine*, 40(1): 181–188.

Kagan, RA, Kinsel, M, Gloor, K, Mylniczenko, ND, Langan, JN, Farina, LL, and Terio, KA. 2009. Morphologic evidence suggestive of hypertension in western gray kangaroos (*Macropus fuliginosus*). *Vet Path*. 46(5):977-84.

Mylniczenko, ND, Kearns, KS and Melli, AC. Diagnosis and treatment of *Sarcocystis neurona* in a captive harbor seal (*Phoca vitulina*). *Journal of Zoo and Wildlife Medicine*, 39(2):228–235, 2008.

Mylniczenko, ND, Harris, B, Wilborn, RE, Young, FA. Blood Culture Results from Healthy Captive and Free-Range Elasmobranchs, *Journ Aquat Anim Health*, 19(3):159-67, 2007.

Mylniczenko, ND, A Medical Survey of Captive Caecilian Diseases. *Journ Herp Med Surg*. 16(4): 120-8, 2006.

Davis, MR, Mylniczenko, ND, Storms, TN, Raymond, F, Dunn, JL. 2006. Evaluation of Intramuscular Ketoprofen and Butorphanol as Analgesics in Chain Dogfish (*Scyliorhinus retifer*) *Zoo Biol* 25:491–500.

Mylniczenko, ND, Wilborn, RE, Curtis, EW, Young, FA. 2006. Differences in hematocrit of blood samples obtained from 2 venipuncture sites in sharks. *Am Journ Vet Res*. 67(11):1861-1864.

Mylniczenko, ND, Manharth, AL, Clayton, LA, Feinmehí, R, Robbins, M. 2005. Successful Treatment of Mandibular Squamous Cell Carcinoma in a Malayan Sun Bear (*Helarctos malayanus*). *Journal of Zoo and Wildlife Medicine*, 36(2):346-348.

Manharth, A, Lemberger, K, Mylniczenko, ND, Pinkerton, M, Pessier, AP, Kammeyer, P de Hoog, S. 2005. Disseminated Phaeohyphomycosis Due to an *Exophiala* species in a Galapagos Tortoise, (*Geochelone nigra*). *Journal of Herpetological Medicine and Surgery* 15[2]:20-26.

Mylniczenko, ND and Manharth, AL. 2001. What's Your Diagnosis? Endolymphatic Organ Enlargement in a Tokay Gecko (*Gekko gecko*). *Journal of Herpetological Medicine and Surgery*, Vol. 11, No. 4: 42-3, 2001.

French, R, Warshawsky, D, Tybor, L, Mylniczenko, ND, and Miller, L. 1994. Upregulation of AP-2 in the Skin of *Xenopus laevis* During Thyroid Hormone Induced Metamorphosis. *Developmental Genetics*, 15:356-65.

NON-REFEREED:

Mylniczenko, ND. Associate Editor Amphibian Medicine, *Journal of Exotic Animal Medicine*. Volume 18, Issue 1, Pages 1-82 (January 2009)

Travis, E, Mylniczenko, ND, Greenwell, MG. 2004. Treatment of a Traumatic Mandibular Symphyseal Fracture and Facial Tissue Loss in a Laced Moray Eel. *ExoticDVM* 6.5: 31-4.

Mylniczenko, ND. 1999. Detection of Behavioral Estrus in the Black Rhinoceros (*Diceros bicornus*). The Journal of the American Association of Zoo Keepers, November 1999.

Book chapters

Elasmobranch Husbandry Manual Nov 2013 (in preparation):

- 1) Diagnostic imaging
- 2) Pharmacotherapeutics

Zoo Animal and Wildlife Immobilization and Anesthesia. West G, Heard D, Caulkett N. Blackwell Publishing, Ames, Iowa, USA, 2013 (under review).

- 1) Boney fish anesthesia
- 2) Cartilagenous fish anesthesia

Clayton, LA and **Mylniczenko, ND.** 2013 (In preparation). "Caecilians." In Fowler, M.E. and Miller, R. E. (Eds): Zoo and Wild Animal Medicine 8. Elsevier Science.

Mylniczenko, ND. 2011. "Ray Medicine." In Fowler, M.E. and Miller, R. E. (Eds): Zoo and Wild Animal Medicine 7. Elsevier Science

Mylniczenko, ND. 2008. "Amphibians" In Mitchell, MA and Tully, T. (Eds): Manual of Exotic Pet Practice. Elsevier Science.

Mylniczenko, ND. 2003. "Caecilians." In Fowler, M.E. and Miller, R. E. (Eds): Zoo and Wild Animal Medicine 5. Elsevier Science.

Husbandry Manuals

Mylniczenko, ND. 2013 (in preparation). Veterinary Management. In The California Sea Lion Husbandry Manual.

Mylniczenko, ND. 2010. Veterinary Management. In The Guenon Husbandry Manual.

Mylniczenko, ND. 2000. "Disinfection". In The Piping Plover Husbandry Manual.

Formal presentations

Mylniczenko, ND. Small mammal potpourri. Exotic Animal Medicine for the Clinical Practitioner (EAMCP) American Association of Zoo Veterinarians Conference, Oakland, CA, 2012.

Mylniczenko, ND* and Penfold, LM. Uterine and Ovarian Disease in Single Gender Housed Southern Stingrays (*Dasyatis americana*). American Association of Zoo Veterinarians Conference, Oakland, CA, 2012.

Mylniczenko, ND. Challenges with Elasmobranch Capture and Anesthesia in Large Aquariums. American Association of Zoo Veterinarians Conference, Oakland, CA, 2012.

Fontenot, DK*, **Mylniczenko, ND**, Fleming, GF. Utilization of Continuous Rate Infusion, Manually Controlled Infusion, and Total Intravenous Infusion for Anesthesia and Analgesia in Zoological Collections. American Association of Zoo Veterinarians Conference, Oakland, CA, 2012.

Mylniczenko, ND* and Penfold, LM. Ultrasound Findings in Southern Stingrays (*Dasyatis americana*) With and Without Reproductive Disease. International Association of Aquatic Animal Veterinarians Conference, Atlanta, GA. 2012

Mylniczenko, ND. Amphibian Medicine. North American Veterinary Conference, Orlando, FL. 2012.

Mylniczenko, ND. Amphibian Anesthesia. North American Veterinary Conference, Orlando, FL. 2012.

Wojcik, KB*, Garner, MM, **Mylniczenko, ND**. Amyloidosis in Pygmy Marmosets (*Callithrix pygmaea*). AAZV AAWV Joint Conference. South Padre Island, TX, 2010.

Lopez, KM*, Fleming, GJ, Mylniczenko, ND, Terrell, SP. Equine Herpesvirus: Implications for Preventive Medicine in Common Zebras (*Equus burchellii*), Hartmann's Mountain Zebras (*Equus zebra hartmannae*), and Thomson's Gazelles (*Gazella thomsoni*). AAZV AAWV Joint Conference. South Padre Island, TX, 2010

Jankowski, G*, Langan, J, Adkesson, MJ, Terio, K, **Mylniczenko, N**, Meehan, T, Schmitt, D. Dilated Ureters, Renal Dysplasia and chronic renal failure in an African elephant (*Loxodonta africana*) AAZV AAWV Joint Conference. South Padre Island, TX, 2010.

Padgurskis, NA*, Langan, J, Terio, K, **Mylniczenko, ND**. Feline Leukemia Virus in a Black-footed Cat (*Felis nigripes*). AAZV AAWV Joint Conference. South Padre Island, TX, 2010

Mylniczenko, ND*, Free Ranging Marine Mammals. ACZM Ultrashort course, 2009. American Association of Zoo Veterinarians, Tulsa, OK. 2009.

Zachariah, TZ*, **Mylniczenko, ND**, Langan, JN, Stapp, EK, Terio, KA Cauda Equina Neuritis in a Baird's Tapir (*Tapirus bairdii*). AAZV ARAV Joint Conference. 2008.

Mylniczenko, ND*, Smith, S, Sewall, L., Facchini, F, Murrey, S, Wielebnowski, N. Treatment of a Leiomyoma in a Western Lowland Gorilla (*Gorilla gorilla gorilla*). Proceedings AAZV ARAV Joint Conference. 2008.

Mylniczenko, ND*. Fish medicine and surgery. Exotic Animal Medicine for the Clinical Practitioner (EAMCP) Proceedings AAZV ARAV Joint Conference. 2008.

Kagan, R*, Gloor, K, **Mylniczenko, ND**, Langan, JN, Kinsel, M, Terio, KA. Morphologic Evidence of Hypertension in Western Gray Kangaroos. (*Macropus fuliginosus*). AAZV, AAWV, AZA/NAG Joint Conference, Knoxville, TN. 2007.

Mylniczenko, ND. Fish Medicine Lecture. Exotic Animal Medicine Lecture Series for veterinary students, University of Illinois. Jan 2006-7.

Mylniczenko, ND. 2005. Shark Medicine Workshop. AAZV conference, Omaha, Nebraska 2005.

Davis, MR*, Mylniczenko, ND, Storms, T, Raymond, F, Dunn, JL. Pain Control in Elasmobranchs? Evaluation of butorphanol and ketorolac as analgesics in dogfish (*Scyliorhinus retifer*). IAAAM conference, Seward, Alaska, 2005

Mylniczenko, ND* and Travis, EK. Techniques Using BioSIS in Aquatic Animals. AAZV conference, San Diego, California, 2004.

Travis, EK*, Mylniczenko, ND, and Miller, CA. End Tidal Carbon Dioxide Values from Passive Exhalations on Pacific White-sided Dolphins (*Lagenorhynchus obliquidens*) and Beluga Whales (*Delphinapterus leucas*) at the John G. Shedd Aquarium. AAZV conference, San Diego, California, 2004.

Storms, TN and Mylniczenko, ND*. Pain and Analgesia in Fish: Unanswered Questions. AAZV conference, San Diego, California, 2004.

Zoonotic disease lecture, 3rd year veterinary class. Jan 23, 2004. Purdue University College of Veterinary Medicine, Lafayette, IN.

Mylniczenko, ND*, Kinsel, M, Young, F, Wilborn, R. "Lessons from a Case of Capture Myopathy in a Pelagic Shark (*Carcharhinus falciformis*). AAZV Conference, Minnesota, 2003.

Mylniczenko, ND*. A Preliminary Report on Abdominal Abscesses in Captive Western Lowland Gorillas (*Gorilla gorilla gorilla*). AAZV Conference, Minnesota, 2003.

Mylniczenko, ND*. Water quality and animal health. AAZV conference, Workshop instructor, Minnesota, 2003.

Clayton, LA* and Mylniczenko, ND. Review of etiology and treatment options for non-traumatic deep shell lesions in freshwater turtles. AAZV Conference, Minnesota, 2003.

Clayton, LA* and Mylniczenko, ND. Ante-mortem diagnosis and management options for renal disease in a pygmy marmoset (*Callithrix pygmaea*). AAZV Conference, Minnesota, 2003.

Mylniczenko, ND*, Clayton, LA, Greenwell, MG, "Effects of Oxyglobin Administration in Rainbow Trout (*Oncorhynchus mykiss*)", AAZV Conference, Milwaukee, WI. October 10, 2002.

Clayton, LA*, Mylniczenko, ND, Manharth, AL, "Hemoabdomen Secondary to Pancreatic Carcinoma in a Ruwenzori Long-Haired Fruit Bat (*Rousettus lanosus*)", AAZV Conference, Milwaukee, WI. October 8, 2002.

Mylniczenko, ND*, "Caecilians: Husbandry and Medical Management", Guest speaker: Chicago Herpetological Society, Chicago, Illinois, January 30, 2002.

Mylniczenko, ND*, Manharth, AL, and Barbiers, RB, "An Uncommon Presentation of a Common Disease in an Indian Rock Python (*Python molurus molurus*)", ARAV/AAZV Joint Conference, Orlando, FL. September 21, 2001.

Mylniczenko, ND*, Manharth, AL, and Barbiers, RB, "An Overview of Medical Products Used in Small Exotic Mammals", ARAV/AAZV Joint Conference, Orlando, FL. September 23, 2001.

Mylniczzenko, ND*, Manharth, AL, and Barbiere, RB, "Caecilians: Husbandry and Medical Management", ARAV/AAZV Joint Conference, Orlando, FL. September 23, 2001.

Francis, BM, Degitz, SJ., **Mylniczzenko, ND***, and Foley, GL, "Role of Cell Death in Abnormal Joint Development Resulting from Retinoic Acid Exposure", *Developmental Biology*, July 1997, 13th International Congress of Developmental Biology.

Mylniczzenko, ND*, Degitz, SJ, Francis, BM, and Foley, GL, "Retinoic Acid Induced Alterations of Extracellular Matrix Molecules in Mouse Forelimb Development", Platform: Teratology Society Meeting, June 1997.

Mylniczzenko, ND*, Degitz, SJ, Foley, GL, and Francis, BM, "Retinoic Acid Induced Alterations of TGF β in Mouse Forelimb Cartilage", *The Toxicologist*, Society of Toxicology Annual Meeting, March 10, 1997.

Mylniczzenko, ND*, Degitz, SJ, Francis, BM, and Foley, GL, "Retinoic Acid Induced Alterations in the Hypertrophic Zone of Cartilage in the Mouse", Poster: Midwest Society of Toxicology meeting, May 10, 1996.

Licenses and certifications

2012. CPR/AED training

2010. USDA Accreditation.

2000. Accreditation for Cervid Tuberculosis Testing, United States Department of Agriculture.

1999. Veterinary License, State of Illinois Department of Professional Regulation, DEA license Class 2-4.

Inactive

2010. Veterinary License, State of Florida Department of Professional Regulation Florida, DEA license Class 2-4.

1990. PADI SCUBA Divemaster.

1989. PADI SCUBA Rescue Diver.

Addendum F

Copy of Donation Letter



Disney Worldwide
Services, Inc.

October 29, 2015

Bernd Marcordes
Zoologischer Garten Köln
Riehler Strasse 173
50735 Köln
Germany

Re: Donation of 0.3 Lion-tailed macaque

Dear Bernd:

Pursuant to discussions between you, on behalf of **ZOOLOGISCHER GARTEN KÖLN** (“you” or “your”) and members of my staff, on behalf of **DISNEY WORLDWIDE SERVICES, INC.** (“**Disney**”), this letter of agreement (this “**Agreement**”) confirms the donation by Zoologischer Garten Köln to Disney as follows:

Three (3) female Lion-tailed macaque, Local ID numbers 3403, 3596, and 3848 (collectively, the “**Animal(s)**”).

By your offer and Disney’s acceptance of this donation, Zoologischer Garten Köln and Disney acknowledge and agree to and with each other that:

a) Disney holds all required licenses and permits applicable to acceptance of title to the **Animal(s)**, if any;

b) you agree to comply with all applicable laws, including, but not limited to, all importing country’s import requirements for the acceptance of the **Animal(s)** (e.,g, any import permits and/or health certificates, or other U.S. federal documentation required by you or Disney for the transfer of the **Animal(s)**);

c) you shall acquire no right under this Agreement to use, and shall not use the names “Disney,” “Marvel,” “ABC,” or “ESPN” (either alone or in conjunction with or as part of any other word or name) or any fanciful characters, designs, trademarks, trade names or copyrighted works of The Walt Disney Company or any of its related, affiliated, or subsidiary companies: (i) in any advertising, publicity, or promotion; (ii) to express or imply any endorsement by Disney of your services; or (iii) in any other manner whatsoever (whether or not similar to uses prohibited by subparagraphs (i) and (ii) above);

d) except as otherwise provided by law, or as required by your memberships in the International Species Information System and the Association of Zoos and Aquariums, or as required to maintain applicable studbooks, you will not release, in whole or in part, any of the



terms of this Agreement or any agreement for the transfer of animals from you to Disney to any third party or disclose same to any newspaper, radio, television or other public medium or in any fashion whatsoever without first receiving the written approval of Disney, which approval Disney may withhold in its sole and absolute discretion;

e) you presently have full ownership, right, title and interest in and to the Animal(s) which you desire to transfer to Disney, and that you will provide Disney with a Bill of Transfer in the form attached hereto as Exhibit "A" transferring ownership to Disney; and

f) you agree that either party to this Agreement has the right to terminate this Agreement, prior to the Animal(s) physically leaving your property, by providing the other party with written notice, and such termination shall be effective immediately upon the other party's receipt of the notice.

If the foregoing correctly sets forth your agreement and understanding with Disney, please so indicate by signing and dating this Agreement in the space provided below and returning that copy so executed to the undersigned as soon as possible.

Yours very truly,

Jacqueline J. Ogden
Vice President

/emm

ACCEPTED AND AGREED TO THIS
____ day of _____ 2015.

ZOOLOGISCHER GARTEN KÖLN

By: _____ (Signature)

_____ (Printed Name)

_____ (Title)

Addendum G

Disney's Support of In-situ
Lion-tailed Macaque
Conservation 2014 to present

**Disney's Support of In-Situ Lion-tail Macaque (*Macaca silenus*) Conservation
2014-2015**

2014: Assessing conservation status of the endangered lion-tailed macaque in Kudremukah National Park, Karnataka, India. \$9,955

Principal Investigator: Divya Vasudev, PhD. Senior Research Fellow, Wildlife Conservation Society, India Program Centre for Wildlife Studies.

Summary: Kudremukah National Park and its surrounding landscapes have been identified as one of the four regions harboring viable populations of Lion-tailed macaques. This area is the largest contiguous habitat for the species and may be home to as many as 40 groups. As a result this area has received the highest level of protection from the government of India. The funds provided by Disney in 2014 were used to help train youth living in local communities to monitor the monkeys; develop an accurate map of lion-tail macaque groups within the park using local youth to record the information; and identify threats faced by the species in this region and develop a list of possible interventions.

2015: Conserving India's Lion-Tailed Macaques. \$25,000

Principal Investigator: Divya Vasudev, PhD. Senior Research Fellow, Wildlife Conservation Society, India Program Centre for Wildlife Studies.

Summary: The lion-tailed macaque is a highly endangered primate species, endemic to the rainforests of Western Ghats, India. The goal of this project is to enhance viability of half of the known population that resides in the northern range. This will be accomplished by mapping distribution, threats and indigenous knowledge; implementing interventions to mitigate threats to macaque survival and hold rural education programs on macaque ecology and conservation.

Addendum H

Holding and Exhibit Drawings

MAHARAJAH JUNGLE
TREK DISNEY ANIMAL
KINDOM



11, Jalan Bukit Merah, 11 Hill Street, Singapore

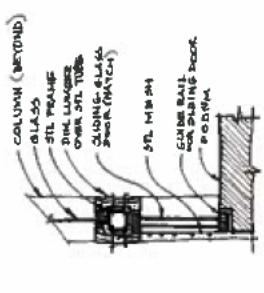
LION TAILED MACAQUE

CONCEPT

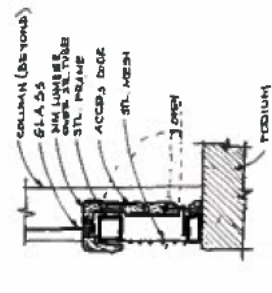
NO.	DATE	REVISION

SECTIONS A & B
SKETCHES

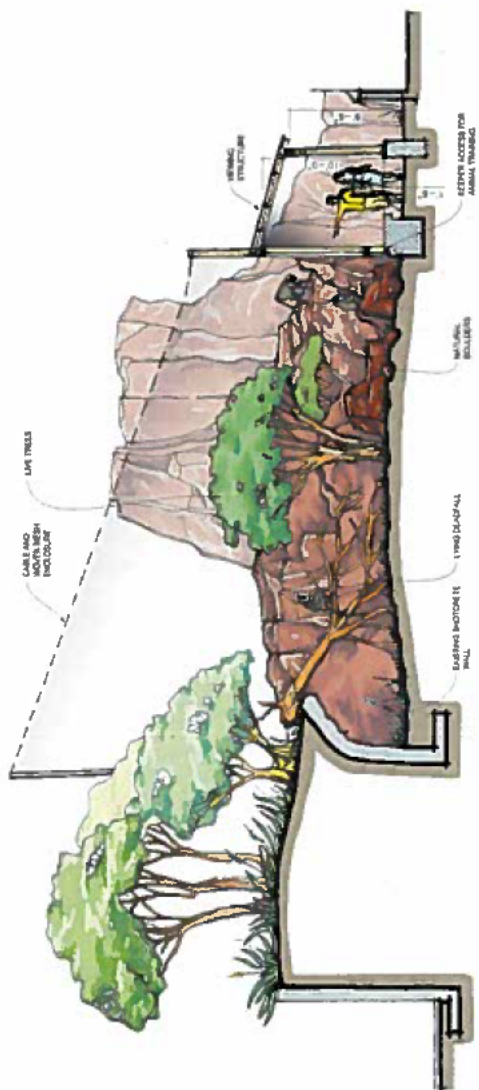
NO.	DATE	REVISION



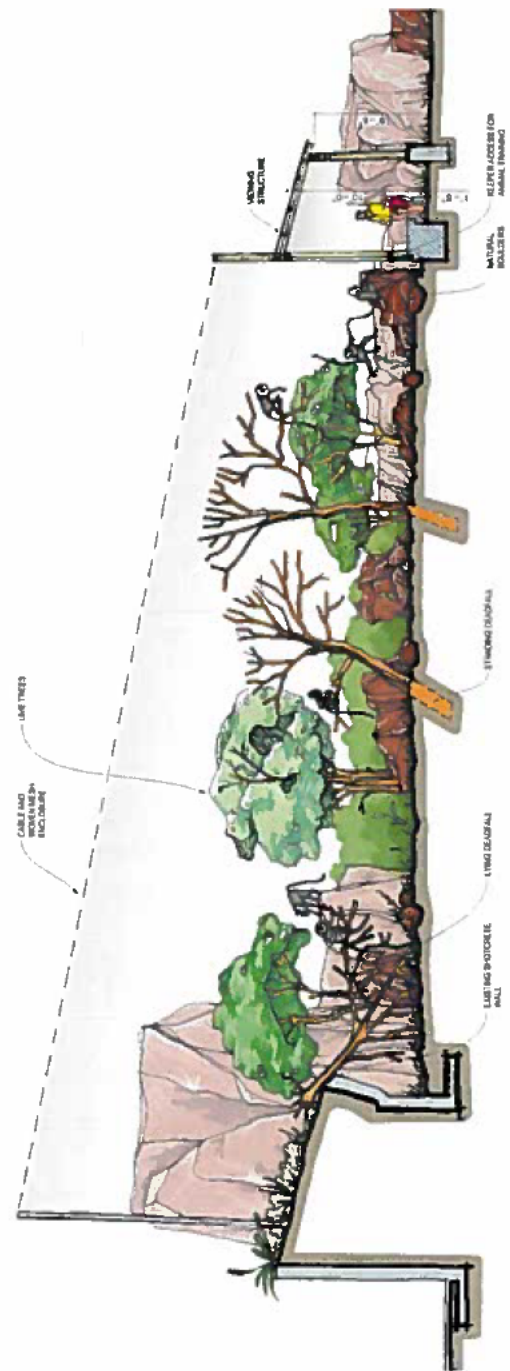
HATCH DETAIL OPTION 1 / GLASS
SCALE 1/8"



HATCH DETAIL OPTION 2 / WOOD
SCALE 1/8"



SECTION A
SCALE 1/8"



SECTION B
SCALE 1/8"

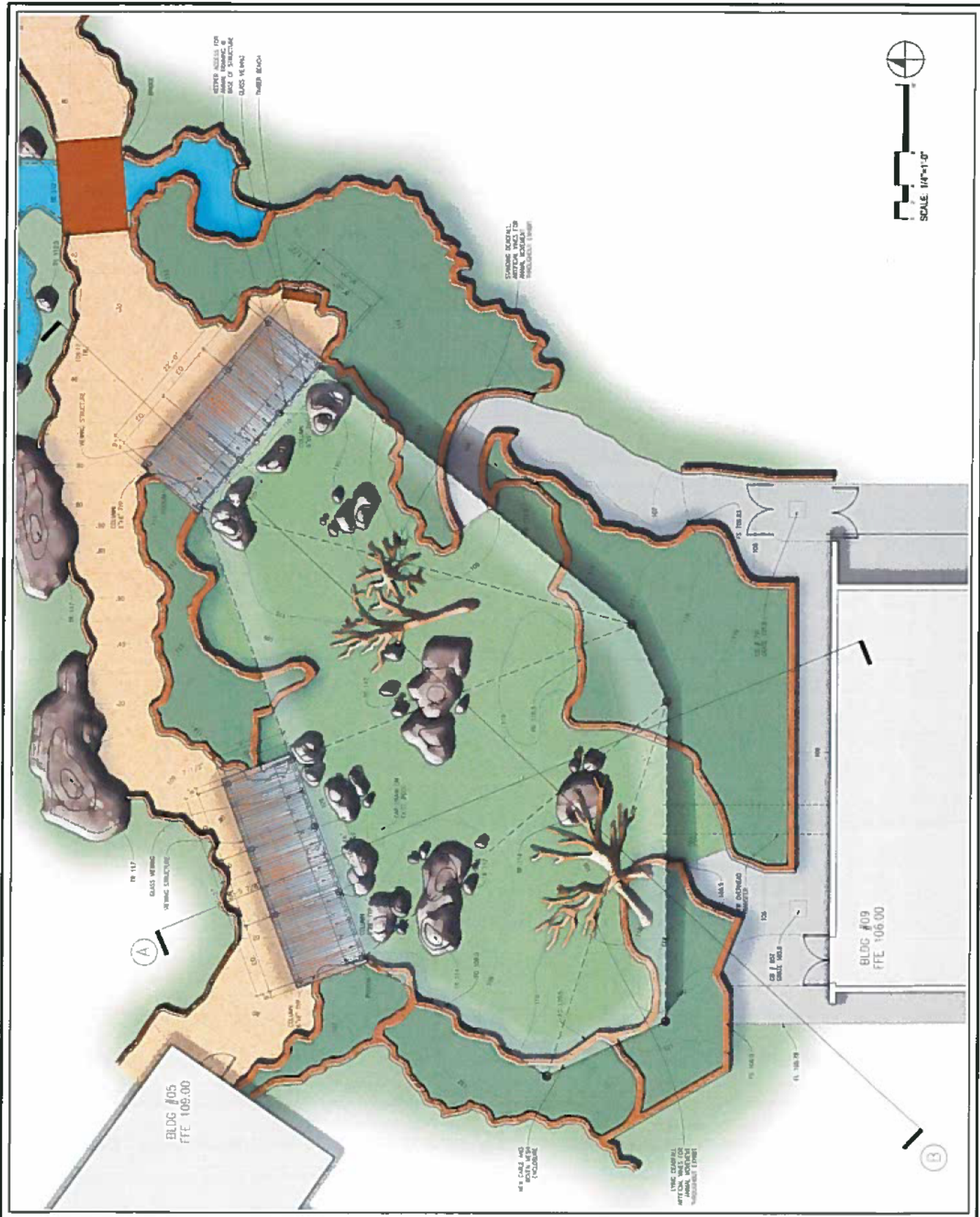
MAHARAJAH JUNGLE
TREK DISNEY ANIMAL
KINDOM



LION TAILED MACAQUE

CONCEPT

SITE PLAN	
NO.	18
DATE	12-11-08
BY	12/11/08



BLDG #05
FFE 109.00

BLDG #09
FFE 106.00

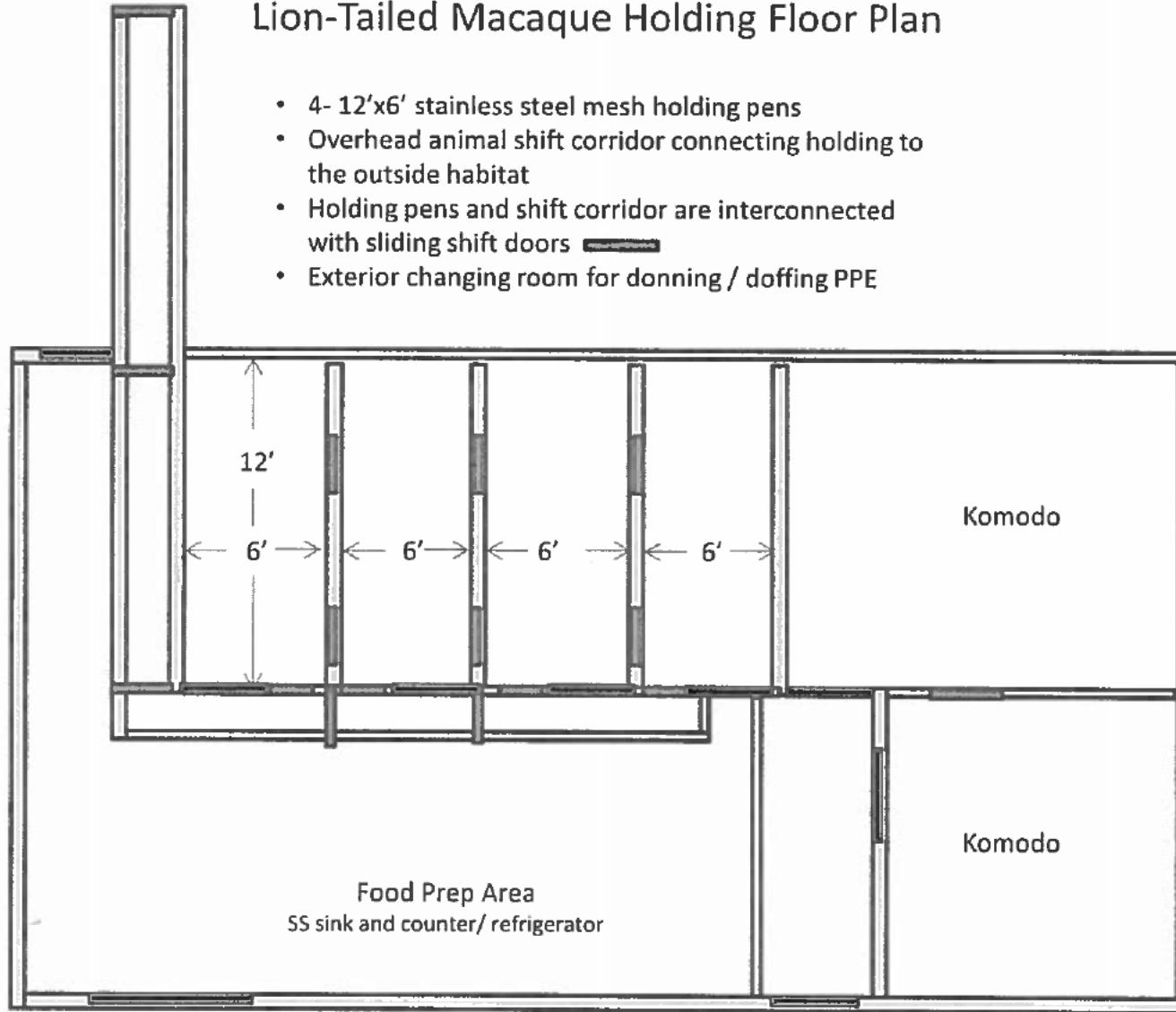
(A)

(B)

↑
Exhibit

Lion-Tailed Macaque Holding Floor Plan

- 4- 12'x6' stainless steel mesh holding pens
- Overhead animal shift corridor connecting holding to the outside habitat
- Holding pens and shift corridor are interconnected with sliding shift doors
- Exterior changing room for donning / doffing PPE



Exterior PPE sink and
eye wash station

Addendum I

Email from Cologne Curator

From: Marcordes [<mailto:marcordes@koelnerzoo.de>]
Sent: Friday, May 08, 2015 6:29 AM
To: Phillips, Rebecca S.
Cc: Sliwa
Subject: AW: RE: 5 pictures of 3 female LTMs from Cologne

Dear Rebecca,

my colleague Alex Sliwa forwarded your question regarding the Source of our LTMs to me. I'm responsible for animal transports here in our zoo and I'm also responsible for the CITES documents. Our LTMs all have a C as source in their documents.

We will buy Vari Kennels for the transport and prepare them so that they will fulfill the IATA regulations!

Could you please send me your full address to prepare the Export CITES documents?

Greetings

i.V. Bernd Marcordes
Kurator / Curator

AG Zoologischer Garten Köln
Riehler Straße 173, 50735 Köln / Cologne
Deutschland / Germany

Tel.: +49 (0) 221 7785 - 108
Fax: +49 (0) 221 7785 - 197
Mobil: [REDACTED]
E-Mail: marcordes@koelnerzoo.de

Von: Sliwa [<mailto:sliwa@koelnerzoo.de>]
Gesendet: Mittwoch, 6. Mai 2015 23:02
An: marcordes@koelnerzoo.de
Betreff: Fw: RE: 5 pictures of 3 female LTMs from Cologne

Hallo Bernd,

ich würde empfehlen, dass wir wieder umgebaute Vari-Kennels für den Transport nehmen. Kannst Du die Frage von Rebecca Phillips beantworten? Ich würde meinen wir schreiben immer "C".

Liebe Grüße, Alex

From: Phillips, Rebecca S. [<mailto:Rebecca.S.Phillips@disney.com>]
To: Sliwa [<mailto:sliwa@koelnerzoo.de>]
Sent: Wed, 06 May 2015 20:24:42 +0100
Subject: RE: 5 pictures of 3 female LTMs from Cologne

Alex,

I am still working on getting the testing requirements from our Vet department in order to send them to

you. Our Director is asking what source code is usually used for your export permit. We are only able to import animals with a source code C (captive born). Also we were hoping that you might know of a source from within Germany that we could purchase the transport crates from. It seems better if we could purchase them from someplace close to you instead of having them shipped to us and then shipped across the ocean.

We shared photos of the three females and everyone thinks they are beautiful!

Thanks again!
Rebecca

ROUND NOU 3 2015

LYNN S Mc DUFFIE

Cash Management Account®

10/30/15 DATE

PAY TO THE ORDER OF

U.S. Fish and Wildlife Service

\$ 100.00

One hundred and 00/100

DOLLARS



Merrill Lynch
Wealth Management®

Bank of America

FOR LYN-tilled Maccione ment