



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: U.S. Fish and Wildlife Service
Division of Management Authority (DMA)
Branch of Permits, MS: 1A
5275 Leesburg Pike
Falls Church, VA 22041-3803
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 Zoological Society of San Diego		1 b. Doing business as (dba) The San Diego Zoo	
3. Description of business, agency, Tribe, or institution Public zoo-conservation & research in addition to education and recreation			
4 a. Principal officer Last name Myers	4 b. Principal officer First name Douglas	4 c. Principal officer Middle name/ initial G.	4 d. Suffix Mr.
5. Principal officer title President/Chief Executive Officer		6. Primary contact name Curby Simerson	
7 a. Business telephone number 619-557-3986	7 b. Alternate telephone number	7 c. Business fax number 619-685-3248	7 d. Business e-mail address csimerson@sandiegozoo.org

C. All applicants complete address information					
1 a. Physical address (Street address, Apartment #, Suite #, or Room #; no P.O. Boxes) 2920 Zoo Drive					
1 b. City San Diego	1 c. State CA	1 d. Zip code/Postal code: 92101-1649	1 e. County/Province San Diego	1 f. Country USA	
2 a. Mailing Address (include if different than physical address, include name of contact person if applicable)					
2 b. City	2 c. State	2 d. Zip code/Postal code:	2 e. County/Province	2 f. Country	

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: MA 778487-0; MA 694912-0 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 I 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) <i>April S. Myers</i> Date of signature (mm/dd/yyyy) <i>April 30, 17</i>	

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.

See Appendix III

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>Panthera pardus orientalis</i>	Amur Leopard	06/16/2015	1	Male	939000001360923 microchip	

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

See Specimen report

Name: Parco Faunistico La Torbiera

Business Name:

Address: Via Borgoticino, 28010 Agrate

Address:

City: Conturbia, NO

State/Province: Piemonte

Country, Postal Code: Italy 12100

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: Parco Faunistico La Torbiera

Business Name:

Address: Via Borgoticino, 28010 Agrate

Address:

City: Conturbia, NO

State/Province: Piemonte

Country, Postal Code: Italy 12100

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: *N/A*
 - i. Scientific name (genus, species, and, if applicable, subspecies) and common name;
 - ii. That the animal was bred and born at your facility;
 - iii. Birth/hatch date (mm/dd/yyyy), and, if applicable, identification information (as described in question 2b above);
 - iv. Name and address of your facility where each animal was bred and born; and
 - v. Location (Name of facility, address, city, State/province, postal code) of parental stock.
- 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:
 - i. Scientific name (genus, species, and, if applicable, subspecies) and common name;
 - ii. That each animal was bred and born/hatched at his/her facility;
 - iii. Birth/hatch date (mm/dd/yyyy), and, if applicable, identification information (as described in question 2b above);
 - iv. Name and address of the breeder's facility; and
 - v. Location (name of facility, address, city, State/province, postal code) of parental stock.

See AZA Letter & Specimen Report

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

G. JUSTIFICATION FOR REQUESTED ACTIVITY.

7. Provide a full statement justifying the proposed activity, particularly the following: *SEE AZA LETTER*
- 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.
 - 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. *SEE APPENDIX IV*
 - Copies of contracts, agreements or other documents that identify persons involved and dates of activities for which authorization is being requested.
8. Provide a statement on how the activities will **enhance or benefit the wild population** (e.g., in-situ and ex-situ projects). *SEE AZA LETTER*
9. If live specimens are to be held in captivity as part of the proposed activity: *SEE APPENDIX IV*
- 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.
 - 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 number of years each species has been maintained at the facility;
 - The number of births by year for each species for the last 5 years; and
 - 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.

H. IMPORTS, EXPORTS, OR RE-EXPORTS.

10. For shipment of LIVE specimens, the transport conditions for animals must comply with the CITES *See Appendix I* 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:
- The type, size, and construction of any shipping container; and
 - The arrangements for watering or otherwise caring for the wildlife during transport.
11. For import of LIVE CITES Appendix-I marine mammal specimens, provide a copy of your FWS or NOAA Fisheries permit or authorization. *N/A*
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). *See AZA Letter*
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. *N/A*
14. If the specimen is being re-exported (e.g., exporting a specimen that was previously imported into the United States), provide: *N/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
 - A cleared copy of Form 3-177, wildlife Declaration for Import (hard copy or electronic release); or
 - 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.
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). *LAX - Los Angeles*
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):
SAME
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.

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

Curby Simerson, Associate Curator of Mammals
619-557-3986
csimerson@sandiegozoo.org

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.

Pg. # 2.

Question #1

APPENDIX III

Fulfillment of Resolution Conf. 5.10

H. 12

Justification for Requested Activity

G. 7.a

How the activities will enhance or benefit the wild population

G.8

Pg 3 \$484 Pg 5

QUESTIONS 56
7
8
12



Erie Zoological Society
Post Office Box 3268
Erie, Pennsylvania 16508
Phone 814 864 4091
www.ErieZoo.org

March 25, 2017

To Whom It May Concern,

I am writing this letter of support for the import of the Amur leopard (*Panthera pardus orientalis*), male from Parco Faunistico La Torbiera (AGRATE) in Piemonte, Italy to the United States by the San Diego Zoo in San Diego, California to further enhance the North American captive Amur leopard population. The male, born 16 Jun 2015, ISIS GAN# GMW15-00549, AGRATE #1729, Intl studbook# 899, transponder# 939000001360923, was born at Parco Faunistico La Torbiera (AGRATE) in Piemonte, Italy. If needed, contact information for the San Diego Zoo is: Curby Simerson, CSimerson@sandiegozoo.org. Contact information for Parco Faunistico La Torbiera is: Francesco Rocca, torbiera@iol.it

With the recent transformation of the world's Amur leopard programs from regional to global, this animal was determined to be genetically valuable to bring into the North American population. He is surplus to the European population, so the import will not have a negative effect on their breeding program. This male will be housed at the San Diego Zoo in San Diego, California and be paired with a young female, Intl studbook# 887, born at the Potawatomi Zoo in Southbend, Indiana in 2015. This pairing was approved by the PMC (Population Management Center) at the Lincoln Park Zoo in Chicago, IL who works closely with all SSP animal programs.

The transfer of animals between the United States and Italy also reinforces the commitment that both countries have in breeding this critically endangered cat. If we can work together on a global scale, and share each other's genetics, the species has a much better chance of survival.

Sincerely,

Cynthia Kreider

Cynthia Kreider
Zoo Director
Amur Leopard SSP Program Leader
Erie Zoo
423 West 38th Street, P.O. Box 3268
Erie, PA 16508
(814) 864-4091 Ext 226
ckreider@eriezoo.org

ASSOCIATION
OF ZOOS &
AQUARIUMS

H. Imports, Exports, or Re-exports

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.

The proposed import is primarily for the enhancement of the survival of the species through captive breeding as part of a global program leading to eventual reintroduction of specimens into native habitat in Russia. The specimens to be imported are genetically surplus to the European zoo population of Amur leopards but are genetically valuable for Amur leopard population sustainability in the North American zoo population.

Amur leopards are one of the few, if not the only, large cats for which a reintroduction program using zoo stock is considered a necessary conservation action with some prospect of reintroduction taking place in the near future. A genetically sound captive or zoo bred population of leopards will contribute offspring to the approved reintroduction program for the Lazovsky Nature Reserve in Southern Sikhote Alin, Russia.

G. 7.a

The purpose of this import is to improve the genetic make-up of the Amur leopard population in North American AZA zoos. As described in the AZA Amur Leopard SSP letter of support (Appendix II). All pairings with these leopards are to be approved by the AZA Population Management Center. Any and all relocations of the leopards or disposition of their offspring will be based on Amur Leopard SSP recommendations.

Amur leopards are one of the few, if not only, large cats for which captive breeding efforts are an integral part of the larger *in situ* conservation plan. Captive bred animals will eventually be used to implement and sustain reintroduction plans in Russia. Please refer to the following websites for additional information on the reintroduction plan for this species,

<http://www.altaconservation.org/amur-leopard/amur-leopard-reintroduction/>,

http://alta.zslsites.org/assets/alta/pdf/documents_for_website/Leopard_reintroduction_plan.pdf

<https://www.zsl.org/conservation/news/plan-for-amur-leopard-reintroduction-approved>

G. 8.

How the activities will enhance or benefit the wild population.

San Diego Zoo has made a multi-year commitment to support the AZA Amur Leopard SSP (and the Amur Leopard and Tiger Alliance [ALTA]) efforts to advance the reintroduction program for the species. San Diego Zoo has committed a minimum of \$6,000 per year for each of the next three years to support of this initiative. Please refer to the included grant agreement between San Diego Zoo and the Amur Leopard SSP. After 2018, the agreement will be extended for an additional three years (or in three year increments into the future).

San Diego Zoo has also provide advice in the design development of a specialized Amur leopard breeding facility in Scotland (Highland Wildlife Park) at which Amur leopards will be bred with minimal human interference to facilitate transfer to Russia when appropriate.

San Diego Zoo is currently seeking additional funding that can be used to support additional breeding facility development as indicated as being needed in the included message from Cindy Kreider – Update on Amur Leopard Reintroduction.

1. Captive breeding as requested by the SSP and Global Management Program,
2. Consulting on species facility development for reintroduction purposes, and
3. Direct financial contributions to ALTA (through the AZA Amur Leopard SSP) for use in advancing the reintroduction program as well as population monitoring as determined needed by ALTA.

From: Cindy Kreider <CKreider@eriezoo.org>
To: Alain Fafard <afafard@zoodegranby.com>, Bekki Lorton <blorton@livingdesert.org>, Beth Jo Schoeberl <BJSchoeberl@denverzoo.org>, Brandi Clark <bclark@srt.com>, Brenda Young <brenda.young@capronparkzoo.com>, Brian Davoren <davoren@cityofmhk.com>, Brint Spencer <tbzcurator@yahoo.com>, Carmi Penny <cpenny@sandiegozoo.org>, Chris Pfefferkorn <chris.pfefferkorn@oregonzoo.org>, Christa Klose <info@junglecatworld.com>, Christina Sheehan <csheehan@rossparkzoo.com>, Dan Dembiec <dembiec@jacksonvillezoo.org>, Dan Houser <danh@omahazoo.com>, Dave Wetzel <dwetzel@jacksonzoo.org>, Diana Weinhardt <diana.weinhardt@state.mn.us>, "Dina Bredahl" <dbredahl@cmzoo.org>, Don Goff <dgoft@beardsleyzoo.org>, "Dusty Lombardi@columbuszoo.org" <Dusty.Lombardi@columbuszoo.org>, "GinaPhillips" <gphillips@hoglezoo.org>, Hubert Paluch <zvetpaluch@co.cape-may.nj.us>, Jamie Carson <James.Carson@moncton.ca>, "JayPetersen" <jay.petersen@czs.org>, Jeff Bullock <jbullock@greenvillesc.gov>, Jim Fouts <jimfouts@tanganyikawildlife.org>, Joe Forys <jforys@auduboninstitute.org>, Joe Maynard <cathouse@qnet.com>, John Kiseda <kisedaj@ci.el-paso.tx.us>, John Piazza <jpiazza@zoonewengland.com>, "Jordon Piha" <jordon.piha@gardencityks.us>, Julie Napier <julie.napier@omahazoo.com>, Kari Hart <khart@auduboninstitute.org>, KenKaemmerer <kkaemmerer@pittsburghzoo.org>, Kevin Murphy <murphy.kevin@phillyzoo.org>, Laszlo Szilagyi <lszilagi@lpzoo.org>, Lindsay Ruffner <LRuffner@cityofboise.org>, Lyn Myers <lmyers@fresnochaffeezoo.org>, "Marc Valitutto" <mvalitutto@statenislandzoo.org>, "marcydean@comcast.net" <marcydean@comcast.net>, Mark Weldon <mark@kidszoo.org>, Michele Green <mgreen@sbzoo.org>, Mike Quick <michael.quick@scz.org>, Pavlova Sheffield <curador@zooleon.org.mx>, Peter Burvenich <Peter@rollinghillswildlife.com>, Randi Meyerson <randi.meyerson@toledozoo.org>, Randy Scheer <rscheer@LincolnZoo.org>, Scotty Stainback <sstainback@caldwellzoo.org>, "Sean Putney" <SeanPutney@fotzkc.org>, Steve Bircher <bircher@stlzoo.org>, "Tammy Schmidt" <tschmidt@zoatlanta.org>, Tim Sinclair-Smith <tsinclairsmith@assiniboinepark.ca>, Mark Reed <mreed@scz.org>, "AlanShoemaker" <sshoe@mindspring.com>, Andi Kornak <amk@clevelandmetroparks.com>, Avanti Mallapur <amallapur@sjgov.org>, Bill Swanson <bill.swanson@cincinnati zoo.org>, Carol Sodaro <carol.sodaro@czs.org>, "Chris Hamlin Andrus" <chamlin@sandiegozoo.org>, Danielle Okeson <vet@rollinghillswildlife.com>, Debbie Thompson <dthompson@littlerock.org>, Doug Armstrong <douga@omahazoo.com>, Eric Albers <eralbers@akronzoo.org>, Eric Lamun <curator@redriverzoo.org>, Jason Herrick <jherrick@fertilityresearch.org>, Jennifer Robertson <Robertson.Jennifer@phillyzoo.org>, Jill Van Milligen <jvanmilligen@hoglezoo.org>, Jo Cook <jc.cook@zsl.org>, Karen Dunn <Kdunn@tulsazoo.org>, Kim Pike <kpike@denverzoo.org>, Kristi Krause <purdoc@gmail.com>, Larry Sorel <lsorel@monroecounty.gov>, Lisa Martin <Lbryant@sandiegozoo.org>, Lynn Tupa <ltupa@CABQ.gov>, Melanie Marotta <melanymarotta@gmail.com>, Melissa Theis <mtheis@lpzoo.org>, Norah Fletchall <nrfletchall@INDYZOO.com>, Rhonda Votino <rhonda.votino@ci.amarillo.tx.us>, Rick Schwartz <rschwartz@nashvillezoo.org>, Sarah Christie <sarah.christie@zsl.org>, Tara Harris <Tara.Harris@state.mn.us>
CC: Jo Cook <Jo.Cook@zsl.org> [REDACTED] Sarah Christie <sarah.christie@zsl.org>
Date: 6/22/2015 6:04 AM
Subject: Amur leopard reintroduction - NEWS!

Everyone,

I am ECSTATIC to pass on to you the e-mail below that I just received this morning!! The Russian Ministry of Natural Resources has finally approved the plan for the reintroduction of Amur leopards into the Russian Far East!! This is a VERY significant milestone!! As you can read below, construction of the facility may begin next spring. My deepest Congratulations to Sarah Christie, Tanya Arzhanova, and Jo Cook who have worked so hard on this endeavor. The SSP is looking forward to helping to move this project forward in any way we can. I will be in touch when I have more details. Yahoo!!

Thank you!
Cindy

Cynthia Kreider
Zoo Director
Amur Leopard SSP Program Leader
Erie Zoo
P.O. Box 3268
423 West 38th Street
Erie, PA 16508
(814) 864-4091 Office Ext 226
[REDACTED]
(814) 864-1140 Fax

From: Jo Cook [mailto:Jo.Cook@zsl.org]
Sent: Monday, June 22, 2015 8:20 AM
To: Cindy Kreider; fuku.zoo@rapid.ocn.ne.jp
Subject: Amur leopard reintroduction - NEWS!

Dear Toru and Cindy,

It is with great excitement that we can confirm the plan for the reintroduction of Amur leopards into the Russian Far East has now been formally approved by the Ministry of Natural Resources. The reintroduction will go ahead in Lazovsky Zapovednik and the new director has already been in touch with us at ZSL regarding facility design etc. There is no fixed timeline in place yet but it has been suggested that construction may begin in spring 2016 and leopards could be sent to RFE in 2017.

There are still many decisions to be made and we are also waiting for relevant MoUs to be signed by MNR but we do not envisage that being a problem. We will soon begin analysing the population and making decisions as to which leopards should be involved in the initial stages of the reintroduction. As we have more news and progress is made we will keep you informed. Please do pass this on to your participants - it is a very exciting time to be involved in Amur leopard conservation and your ongoing support and cooperation is much appreciated!

Plan for Amur leopard reintroduction approved

23rd June 2015

The Zoological Society of London (ZSL) is delighted to share the news that a plan for the reintroduction of Amur leopards into the Russian Far East has been formally approved by Russia's Ministry of Natural Resources. The site for the reintroduction has been agreed as Lazovsky Zapovednik (State Nature Reserve) in the South-Eastern-most tip of Russia.



Amur leopard mother with cub. (c) Chris Godfrey/Animal Imagery.

The Critically Endangered Amur leopard (*Panthera pardus orientalis*) is probably the only large cat for which a reintroduction programme using zoo stock is considered a necessary conservation action.

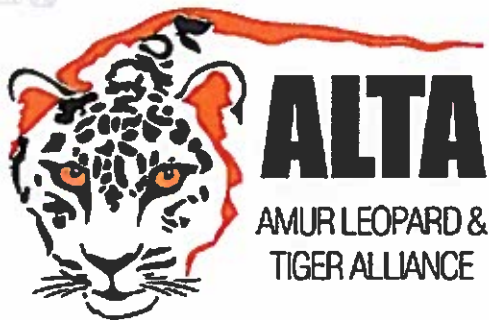
There are currently estimated to be between 50-70 left in the wild, in a small pocket of Russia between Vladivostok and the Sino-Russian border. Around 220 Amur leopards are currently in zoos throughout Europe, Russia, North America and Japan. All are part of a global conservation breeding programme jointly coordinated by ZSL and Moscow Zoo.

Established pairs of breeding leopards from the breeding programme will be transported to Russia where they will live in specially constructed enclosures. Here they will be allowed to breed and rear cubs, which will learn to live in that environment from the very start of their lives. Once they are suitably mature, the cubs will be released.

There is no fixed timeframe in place as yet but it has been suggested that construction of the facilities may start in spring 2016, and leopards could be released in 2017.

ZSL will soon start analysis of which leopards will be initially used.

More information about the reintroduction programme, including the approved plan, can be found on the [Amur Leopard and Tiger Alliance website](#).



Monitoring Amur leopards in the Russian Far East – Interim report

We identified six objectives within the scope of this grant to achieve our goal of developing a yearly monitoring program for the entire Amur leopard population using a rigorous survey design for Land of the Leopard National Park. Here, we present our successes at reaching those objectives.

Objective 1: Continue to conduct camera trap activities in our long-term study area in Nezhinskoe Hunting Lease and in the northern sector of Land of the Leopard National Park.

Using a team comprised of WCS and LLNP staff, all cameras were in place and operational by early March 2015, and were collected at the end of May. However, due to difficulties of accessing some sites (in spring high waters and wet and muddy roads sometimes make travel impossible), the last trap was collected only at the start of July. In total, we had 54 pairs of camera traps (which worked an average of 106 days), for a total of 6,155 trap nights.

When placing camera traps, we selected game trails along the southern fringes of mountain plateaus or at narrow outcroppings that funnel animal movements to a specific area (thus any leopards that passed were sure to be photographed). In 2015 we set camera traps at 54 locations (5 single traps and 49 pairs) across a 792 km² area; 34 of these were in the Nezhinskoe Sector and the remaining 20 locations were in the Northern Sector (18 pairs and 2 single traps). In total, 103 camera traps were deployed in these two sectors.

These camera traps stored a total of 300,000 photographs, of which about 10,000 were animals and birds and the remainder were empty of wildlife (and usually triggered by grass and/or trees swaying in the wind). Of the wildlife images, 740 were of leopards and 256 were of tigers. Given that any single photograph might contain an identifiable leopard or tiger—perhaps even one in the background or partially obscured—each image must be carefully scrutinized; a task that required high concentration and patience. Therefore, the process of developing a comprehensive database is still in progress.



L31, the brother of female named Lynx. He was first photographed as a cub with his mother in 2010. © WCS Russia and Land of the Leopard National Park

Objective 2: Work in conjunction with national park staff and other organizations to solidify the survey protocols and results for the entire Land of the Leopard National Park.

We have been very successful at working collaboratively with staff at Land of the Leopard National Park which includes all parties conducting camera trap work (LLNP, WCS, and the Institute for Sustainable Use of Natural Resources – a local NGO). We operate under a joint agreement for this project, with our field leader Aleksandr Rybin working on a daily basis with park employees to deploy and collect camera traps, and coordinating database management with Anya Vitkalova, park scientist (who participated in a workshop on analyzing camera trap databases organized by WCS in August, 2015, in Fort Collins, Colorado). Project PI Dr. Dale Miquelle coordinates all work with Director of the park (Tatiana Baronovskaya) and her Deputy Director for Science (Alyona Salmanova).

WCS took the lead in developing a document outlining methods for conducting camera trap surveys in the Russian Far East, and now this “protocol” was agreed upon by attendees of a camera trap workshop in 2013 organized by WCS. While this protocol has not been formally approved by the Russian government as a basis for conducting surveys (a process commonly done in Russia) all organizations using camera traps have agreed to use the document as a basis for organizing camera trap survey work in LLNP.

We have also developed protocols for managing the massive database that is being developed for LLNP. We provide copies of all photographs to Land of the Leopard National Park staff, and in turn they share photographs of tigers and leopards across the entire park.

Objective 3: Expand the network of cameras to better survey and estimate numbers of tigers in Land of the Leopard National Park.

For the second year, working collaboratively with all partners, we have been successful in putting out a comprehensive network of camera traps across the entirety of LLNP. In 2015, the total area we surveyed added an additional 18 km² of leopard habitat as compared to the area we surveyed in 2014 (from 774 km² to 792 km²). Although the expansion in 2015 is modest, it is approximately double the area we surveyed prior to 2014, and resulted in the highest camera trap densities (6.8 cameras per 100 km²) since 2011.



A female Amur leopard (L46). This is the first time this female has been detected. Image © WCS Russia and Land of the Leopard National Park.

Objective 4: Continue coordinating with the park to develop a database of camera-trapped leopards and tigers for the entirety of southwest Primorye that can be used yearly to identify individuals.

Just as we are currently working on data extraction and analysis for our study area within Land of the Leopard National Park, Anya Vitkalova is also busy working on data analysis for the remainder of the camera trapping area within the park. As soon as these two databases are complete, we will merge the results to conduct a park-wide analysis, which will give us a park-wide estimate of leopard numbers (the second consecutive year this work will have been done). When completed, Aleksandr Rybin of WCS will crosscheck the database provided by LLNP to come to an agreement on the final database that will be the basis of analyses to derive the yearly estimate of abundance and density for the entire LLNP.

Objective 5: Continue to reach out to Chinese partners to attempt to exchange information on individual tigers and leopards (through use of standardized camera trap databases) to explore movements of these cats across the international border.

A transboundary meeting of Chinese and Russian delegates met in spring (May 11-14, 2015) to discuss multiple topics related to transboundary management of tigers, leopards, and biodiversity in general across the border between LLNP, Hunchun Reserve, and the larger Jilin-Primorye border region in southwest Primorye. This meeting developed a number of concrete recommendations on further work, leading to the arrival of a delegation from Beijing Normal University in Vladivostok in August 2015. At this meeting, a joint agreement was derived between the university and the park to exchange information, and most importantly, to exchange databases on camera trap data of both tigers and leopards. While in Vladivostok, both teams worked together to derive an overall estimate of numbers of leopards counted on both sides of the border. A joint press release (<http://leopard-land.ru/news/3399>) revealed that over 80 individual leopards were identified over the past two years on both sides of the border. While this is not the same as a population estimate (which must be done over a short time frame so that mortalities, births, and emigration are not confounding effects) the results are exciting and suggest that perhaps an even larger number of leopards now exist in this meta-population. We are looking forward to working with LLNP staff now to conduct a transboundary analysis to derive a statistically solid estimate of leopard abundance across the entire range of leopards.

Objective 6: Expand our database to include data on all species to retain the potential value of camera traps as indicators of biodiversity.

A continuing problem in management of camera trap databases is the lack of a suitable system for managing the enormous amount of information that is generated with the use of camera traps. Unless a database management system is in place, the vast majority of potential information is lost in the process of shifting through photos to get to the one aspect a researcher is most interested in. Only recently have several database systems become available to manage the complexities of data generated by camera traps.

WCS Russia Program has spent the last few months investigating potential database management systems for the Russian Far East. We have so far spent time investigating three potential systems: one developed by the Colorado Fish and Game primarily for management of their camera trap data base for introduced lynx (this database and its objectives most clearly align with those of ours); a second database used for monitoring biodiversity in tropical protected areas around the world is a useful repository of information, but is a bit more difficult to use as a stand-alone desktop for protected areas not included in their monitoring program; and a number of recommendations for managing photographs have been published elsewhere that we are investigating. The program developed by Colorado Fish and Game is most promising, but there are limitations (it is not clear if it can be translated in Russia) so we continue to explore options. We hope in the near future to have a system that we can propose for all protected areas in Russia to use to monitoring wildlife diversity using camera traps.



An adult male (L47), captured in 2014 for the first time. We have several images of this animal but always from the same camera trap. Image © WCS Russia and Land of the Leopard National Park.

Conclusion

Although this is only an interim report, we have made strong progress toward our objectives. In turn, this is increasing our understanding of Amur leopards in Russia. We set 103 camera traps out for 167 trap days over a 792 km² area—our largest survey area to date. And, importantly, we helped facilitate a breakthrough meeting between Russian and Chinese officials to share data on leopard and tiger movements. We thank ALTA for their continued and critical support of Amur leopard conservation in Russia.

The Zoological Society of London

ZSL is incorporated by Royal Charter - Registered Charity in England and Wales no. 208728. Principal Office England - Company Number RC000749 - Registered address Regent's Park, London, England NW1 4RY

Fondation Segré

We would like to thank Fondation Segré for covering the administration costs of ALTA, which enables us to send 100% of donations to field projects

Zoological Society of San Diego ("ZSSD")

ZSSD GRANT AGREEMENT – UNDESIGNATED	
AWARD RECIPIENT/GRANTEE Name: Erie Zoo (Amur Leopard SSP) Address: 423 West 38 th Street P.O. Box 3268 Erie, PA 16508 Phone: 814.864.4091 ext 226 Fax: 814.864.1140 Email: CKreider@eriezoo.org Payment Instructions: By check made out to Erie Zoo specifying application to ALTA's Amur Leopard Conservation Initiative	PRINCIPAL INVESTIGATOR (IF APPLICABLE) 2016, 2017 AND 2018 CORE SUPPORT OF BROAD AMUR LEOPARD CONSERVATION MONITORING ACTIVITIES OF ALTA (AMUR LEOPARD AND TIGER ALLIANCE) COORDINATED IN THE U.S. BY THE AMUR LEOPARD SSP BASED AT ERIE ZOO.
ZSSD PROGRAM OFFICER/PRIMARY CONTACT FOR THIS AWARD Name: Carmi G. Penny Address: 2920 Zoo Drive, San Diego Zoo, San Diego, CA 92101 Phone: 619.557.3982 Fax: 619.232.4117 Email: cpenny@sandiegozoo.org	

The ZSSD has approved a contribution in the amount of \$6,000.00 (the "Grant") each year for 2016, 2017 and 2018 to ALTA Amur Leopard Conservation Initiative through the Amur Leopard SSP based at Erie Zoo (the "Grantee") for application in support of the broad conservation activities of the Grantee. It is ZSSD's intent that the contribution support activities consistent with the requirements for enhancement as defined by the U.S. Fish and Wildlife Service for the specific taxa prioritized by the Grantee.

1. The Grant shall be used for general conservation, educational and research purposes as identified by the Grantee and which purposes are exclusively charitable, educational, or scientific as described in Section 170(c)(2)(B) of the United States Internal Revenue Code Of 1986, as amended, unless otherwise agreed to, in advance in writing, by ZSSD.
2. The Grant, as well as income earned from any investment of the Grant Funds, will not be expended for any other project without the ZSSD's prior written approval.

3. The Grant funds will be expended substantially in accordance with the budget approved by the ZSSD.
4. A final or annual narrative report shall be submitted within sixty (60) days of the one year anniversary of the Grant. The narrative report shall be submitted, by email, to the ZSSD Primary Contact for this Award. Narrative reports may be incorporated into ZSSD reports to its Board of Directors and donors. Failure to submit reports on time may result in termination of your support. It is expected that narrative reports will be submitted in English. If an exception is made, we ask that a summary in English accompany the report. Copies of any press releases or articles announcing the Grant, and any other publications discussing expenditure of the Grant funds should also be included with narrative reports.
5. The ZSSD may monitor the use of the Grant (including by making site visits), discuss the Grant-funded activities, and finances with representatives of the Grantee, and review records and other materials, including financial records, connected with the Grant, and the Grantee agrees to cooperate with the ZSSD and provide such access as is reasonably necessary for the ZSSD to carry out such activities.
6. As between the parties, ZSSD owns all right, title and interest in its trademark, trade name and logo (the "ZSSD Marks"). The Grantee agrees not to make any use of the ZSSD Marks, except as expressly authorized in writing; provided, however, that ZSSD hereby requests and approves the use of the ZSSD Marks by the Grantee in any popular and scientific reports and publications that may result from the project. Such written acknowledgement should be as follows: San Diego Zoo Global. All requests for approval pursuant to this section shall be sent to: Carmi G. Penny.
7. The Grantee shall own all copyrights and other intellectual property rights in any photographs, films, and other audio-visual material ("Creative Work") developed by the Grantee. Notwithstanding the foregoing, the Grantee hereby grants ZSSD the non-exclusive right and license to use, reproduce, distribute and create derivative works from such Creative Work in connection with its charitable purposes.
8. ZSSD is not liable for damages from illness, injury, or death arising out of the Grantee's activities. The Grantee agrees to indemnify ZSSD and its officers and directors, including the cost of defense, for any claim made against them arising out of the Grantee's performance under this agreement.
9. The Grantee is expected to behave humanely toward animals he or she encounters in his or her research, and his or her fieldwork will be evaluated in this regard by ZSSD staff. All project activities must adhere to the GUIDELINES FOR THE CAPTURE, HANDLING, AND CARE OF MAMMALS AS APPROVED BY THE AMERICAN SOCIETY OF MAMMALOGISTS available at www.mammalsociety.org/committees/commanimalscareuse/98acuguidelines.pdf. Further, note the following excerpt from the Animal Behavior Society's Guidelines for the Use of Animals in Research. "Observation of free-living animals in their natural habitats may involve disruption, particularly if feeding, capture, or marking is involved. While field studies further scientific knowledge and advance an awareness of human responsibility towards animal life, investigators should always weigh any potential gain in knowledge against the adverse consequences of disruption for the animals used as subjects and also for other animals and plants in the ecosystem. Two useful sources of information are books edited by Stonehouse (1980) and Amlaner and MacDonald (1980)."
10. Grant funds shall not be expended to carry on propaganda or otherwise attempt to influence legislation or any public election. Funds may only be used to engage in activities that are for charitable, scientific, or educational purposes.

11. ZSSD is bound by U.S. laws and regulations that prohibit having transactions with, and providing material support or resources to, individuals or groups that engage in or support acts of terror. By becoming a grantee under this agreement, you represent and certify that you do not engage in or support, directly or indirectly, acts of terror. Further, you represent and certify that you are implementing, and over the course of this agreement will continue to implement, reasonable monitoring and oversight to assure the continuing truth of these representations and certifications and that, on request, you will provide documentation of the monitoring and oversight of these efforts. ZSSD may terminate this agreement immediately if you fail to comply with the conditions stated in this paragraph.

12. The Grantee represents and warrants that it is in compliance with all statutes, executive orders and regulations restricting or prohibiting U. S. persons from engaging in transactions and dealings with countries, entities or individuals subject to economic sanctions administered by the U.S. Treasury Department's Office of Foreign Assets Control ("OFAC"), including that (i) the Grantee does not appear on the Specially Designated Nationals and Blocked Persons list (the "List") maintained by the U. S. Treasury Department's Office of Foreign Assets Control and (ii) the Grantee will check the List periodically, and if it appears on the List at any time, will notify the ZSSD immediately, it being understood that the Grant will automatically terminate if the Grantee appears on the List.

13. You hereby certify that (1) you have not made, given, promised, or offered any payment, directly or indirectly, to any government employee or official (a) in contravention of any U.S. or other applicable law (including, but not limited to, the U.S. Foreign Corrupt Practices Act) or regulation; and (b) without the express consent of the government for which the employee or official works; and (2) any payments made to any government employee or official pursuant to this agreement is reasonable, bona fide, and directly related to the activities funded under this agreement. It is your responsibility to assure compliance with this requirement, and to maintain, and provide at ZSSD's request, documentation demonstrating such compliance. You hereby certify that you have not and will not make (directly or indirectly) any payment to any government employee or official (x) to influence any official government act or decision, (y) to induce any government employee or official to do or omit any act in violation of his or her lawful duty, or (z) to obtain or retain business for, or direct business to any individual or entity.

14. **TERMINATION**

- a. **For Cause.** If ZSSD shall determine at any time that the Grantee has failed to comply with any term of this agreement, ZSSD may thereupon terminate the agreement, in whole or in part, by giving written notice to the Grantee. Such notice shall become effective upon receipt.
- b. **For Convenience.** Either party may terminate this agreement for convenience, by providing written notice to the other party. Such notice shall become effective thirty (30) days after its receipt.
- c. **Expenses After Termination.** ZSSD shall not be obligated to pay for any expenses incurred by the Grantee after the effective date of termination. Upon the effective date, the Grantee shall stop work, immediately terminate any subgrants or other obligations that it may have entered into involving Grant funds provided under this agreement, and shall settle all outstanding liabilities and all claims resulting from such termination.

- d. Within thirty (30) days of termination under this Section, the Grantee shall deliver to ZSSD a final narrative report, a final financial report, and any unexpended Grant funds that are not obligated by a legally binding transaction. ZSSD may take all actions necessary to recover such Grant funds, at the Grantee's expense.

15. **AMENDMENTS AND MODIFICATIONS.** This agreement may not be amended, supplemented, or modified in any respect except by written agreement of each of ZSSD and the Grantee, duly signed by their respective authorized representatives.

16. **RELATIONSHIP OF THE PARTIES.** Nothing in this agreement shall be construed to create a relationship between the parties of agency, partnership, nor joint ventures, or to render either party liable for any debts or obligations incurred by the other. Neither party is authorized to make representations on behalf of the other, or to bind the other in any manner whatsoever.

17. **GOVERNING LAW.** This agreement shall be governed by and interpreted in accordance with the laws of California.

18. **ARBITRATION.** It is ZSSD's policy to make every reasonable effort to resolve all issues or disputes that may arise under this agreement fairly by negotiation without litigation, if practicable. Any dispute arising out of or relating to this agreement which is not settled by agreement of the parties shall be finally settled by arbitration in accordance with the AAA Arbitration Rules as at present in force. Any disputes that cannot be resolved by negotiation shall be subject to arbitration using a single arbitrator. The arbitration shall take place in San Diego, California, and the results of which shall be final, non-appealable, binding on each party, and enforceable in any court of competent jurisdiction.

ACCEPTED AND AGREED TO BY:

ZSSD

By: Carmel G. Penny

Title: Director CHS/Curator of Mammals

Date: 15 DEC 2015

By: Robert Wiese

Title: Chief Life Sciences Officer

Date: 17 Dec 2015

[Grantee]

By: Cynthia Kreider

Title: Amur Leopard SSP
Program Leader

Date: 12-14-15

Pg 3
Pg 4

Question #2
#56

Italy

Specimen Report



ISIS GAN GMW15-00549

Panthera pardus orientalis

Amur leopard

Order Carnivora

Family Felidae

IUCN Critically Endangered
(CR)

CITES I

Start Date Jan 01, 1800

End Date Apr 19, 2016

© 2016 International Species Information System

Basic Animal Information

Sex - Contraception Male -
Birthdate - Age Jun 16, 2015 - 0Y,10M,3D
Origin Parco Faunistico La Torbiera
Birth Type Captive Born
Sire MIG12-29268481 (AGRATE / 1672)

Status Alive
Preferred ID
Rearing Parent
Hybrid Status
Dam MIG12-28508110 (AGRATE / 1615)

Current Collection
Clutch / Litter

Collection Trip
Enclosure

No Local Data Differences Found

Visit History

Date In	Acquisition - Vendor/Local ID	Phy. Own Reported By	Disposition - Recipient/Local ID	Phy. Own Date Out
Jun 16, 2015	Birth/Hatch	In In AGRATE / 1729		

Identifiers

Reported By	Effective Date	Type	Identifier	Location	Status	Comments
AGRATE	Aug 17, 2015	Int'l Stdbk#	899		Active	
AGRATE	Jul 23, 2015	Transponder	939000001360923	Interscapular	In-Use	
AGRATE	Jun 16, 2015	Local ID	1729		Active	

Sex Information

Reported By	Date	Sex	Comments
AGRATE	Jun 16, 2015	Male	

Parent Info

Reported By	In ZIMS	Parent Info	Type / Probability	Birth Date	Comments
AGRATE	Yes	MIG12-28508110 [AGRATE / 1615]	Dam/100%	Jun 13, 2010	
AGRATE	Yes	MIG12-29268481 [AGRATE / 1672]	Sire/100%	Apr 14, 2011	

Ancestry Information (calculated by ISIS from shared data)

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

Rearing Information

Reported By	Start Date	End Date	Rearing	Comments
AGRATE	Jun 16, 2015		Parent	

No Contraception Information Found

No Life Stage Information Found

No Development Milestones Found

No Enclosure History Found

No Management Plan Found

No Permits Found

SAN DIEGO ZOO

ANIMAL TRANSACTION NOTICE

Question 2
56

OUTGOING () INCOMING (X)
INTERNAL () PAPER TRANSFER ()

Notice Date: March 25, 2017

Transaction #: SDZM2017-024

From: C. Simerson

To: Mammal Zoo Vet Services Zoo Director Other
Zoo Curatorial Path
Registrar CRES
Dir. Col. Visual Services (1- as requested/needed) SDZSP

Name: Parco Faunistico La Torbiera
Address: Via Borgoticino, 28010 Agrate
Conturbia NO

Shipment Date: TBD 2017 (permit dependent)
Contact: Francesco Rocca

Telephone: +0322.832135

FAX: +0322.832525

E-Mail: torbiera@iol.it

Collection Contact for Shipment Preparation:

Animal Care Manager: C. Hamlin-Andrus

Zoo Admin. L. Sica

SPECIMEN IDENTIFICATION

(Line 1: Sex Ratio, Common Name, Scientific Name, Category [i.e. E, T, CI, CII, CIII,] Transaction Type, Value
Line 2: Sex, ID, Acc#, SB # if applicable, Birth, Reason for individual price difference, Location of specimen,)

1.0 Amur Leopard *Panthera pardus orientalis* CI, E, Donation

Male - GMW15-00549- #1729 -b. 16 Jun 2015- Stb# 899- TP: 939000001360923

LAND AIR X ACCOMPANIED: YES NO X SITE INSPECTION/MAP APPROVED EAZA

AZA (no) EAZA (yes) USE TAX n/a SALES TAX n/a PHOTOGRAPH NEEDED n/a

COMMENTS: (include: why the move is needed as well as the current number of animals of this species at the Zoo before the move. Provide enough explanation so a reader has a quick understanding of what is going on. If pending for a long period explain why.)

SDZ has 1.1 at this time with other moves planned in 2017 in support of the AZA/SSP and International Amur Leopard program. Acquisition of 1.0 Amur leopard is in support of the collaborative GSMP (AZA/EAZA) conservation and population sustainability breeding effort. Eventually animals will be relocated from San Diego Zoo to other program partners for development of the metapopulation.

PERMIT REQUIREMENTS: CADWF Restricted Species, USF&W ESA/CITES import permit, Italian export permit

LOAN AGREEMENT TERMS: N/A

DERATION: N/A

Final Completion Date:

APPENDIX IV

9 a: Facility Description

9 b: Staff Experience

9 c: Length of experience with different species

9 d: Leopard births

9 e: Leopard Mortalities

Description of Leopard Exhibits San Diego Zoo

The San Diego Zoo has invested over \$3,000,000 into the design and construction of four new leopard and management facilities. These exhibits are designed to be suitable for primary use by snow leopards and Amur leopards in support of Association of Zoos and Aquariums (AZA) Species Survival Programs for the two species.

Construction of the four exhibits was completed in May 2015 and they are now in use by snow leopards and Amur leopards.

General Animal Exhibit Description

Each exhibit accentuates the ability for the cats to use the exhibits' cubic volume rather than just square footage through incorporation of artificial rockwork and overhead log travel corridors that allow the cats to not come to the ground unless they choose to do so. All exhibits are interconnected through use of overhead crossover corridors and ground corridors. Exhibits can be used singly or in multiple combinations as determined by the needs of the cats.

Exhibit dimensions are as follow. Please note that the square footage as well as the cubic volume is averaged because of the irregular dimensions of the exhibits.

Exhibit 1: 54'l x 32'w x 18'h (1,728 sq ft or 31,104 cu ft)

Exhibit 2: 60'l x 24'w x 18'h (1,440 sq ft or 25,920 cu ft)

Exhibit 3: 68'l x 20'w x 18'h (1,632 sq ft or 29,376 cu ft)

Exhibit 4: 54'l x 21'w x 18'h (1,134 sq ft or 20,412 cu ft)

Containment is achieved with 2" x 2" stainless woven or welded wire mesh for all external aspect of all four exhibits (Picture 8).

Substrate within the exhibits is an organic mix that will allow establishment and growth of plants. Some sections of non-organic substrate/terrain variability are provided (pictures 9, 10, 11, 12, 13, 16, 19, 22)

Each exhibit has a fresh water source as shown in the pictures (21, 23).

Shelter from the elements and or shade are provided by "dens" in rockwork where rockwork is present, overhead shelter adjacent to buildings or through access to the indoor management spaces depending upon severity of environmental conditions. (Pictures 17, 18, 19, 20)

Climbing structures and elevated pathways are provided in all four exhibits to allow the cats choices on how to utilize their living spaces. The cats can access all four exhibits (if opened to them) using only elevated pathways

Management Building Description: Refer to pictures 25 - 50

Three management buildings are provided creating indoor space for all four exhibits if and when needed. San Diego Zoo does not lock cats into indoor management spaces (or bedrooms) without specific cause. Typically the cats are allowed to be in their outdoor habitats and are brought into management spaces for health checks, behavioral training, diet adjustment, maternity purposes and environmental extremes when they develop.

Building A, located between Exhibit 1 and Exhibit 2, is the largest of the three buildings. It has the primary animal care kitchen, keeper work space as well as record office, computer, and squeeze (hugger) chute for training and medical use. Four management spaces (bedrooms) are provided. Each space is 77 sq ft with a height of 10 ft. Refer to the pictures provided.

Building B (exhibit 3) provides two animal management staff, each 8' x 11', a small field kitchen as well as squeeze/hugger capability.

Building C (exhibit 4) provides another two indoor management spaces. One space is 6' x 11' (66 sq ft) with a second space of 8' x 11' (88 sq ft). A small field kitchen is provided for keepers and there is also squeeze/hugger capability.

Building A is the primary management building when needed. Building B and Building C are supplementary and can be used either for maternity purposes, separation of males from females, medical treatment or other isolation needs.

All eight indoor management spaces are equipped with their own fresh water source and elevated platform capability. Heat is available in all eight management spaces.

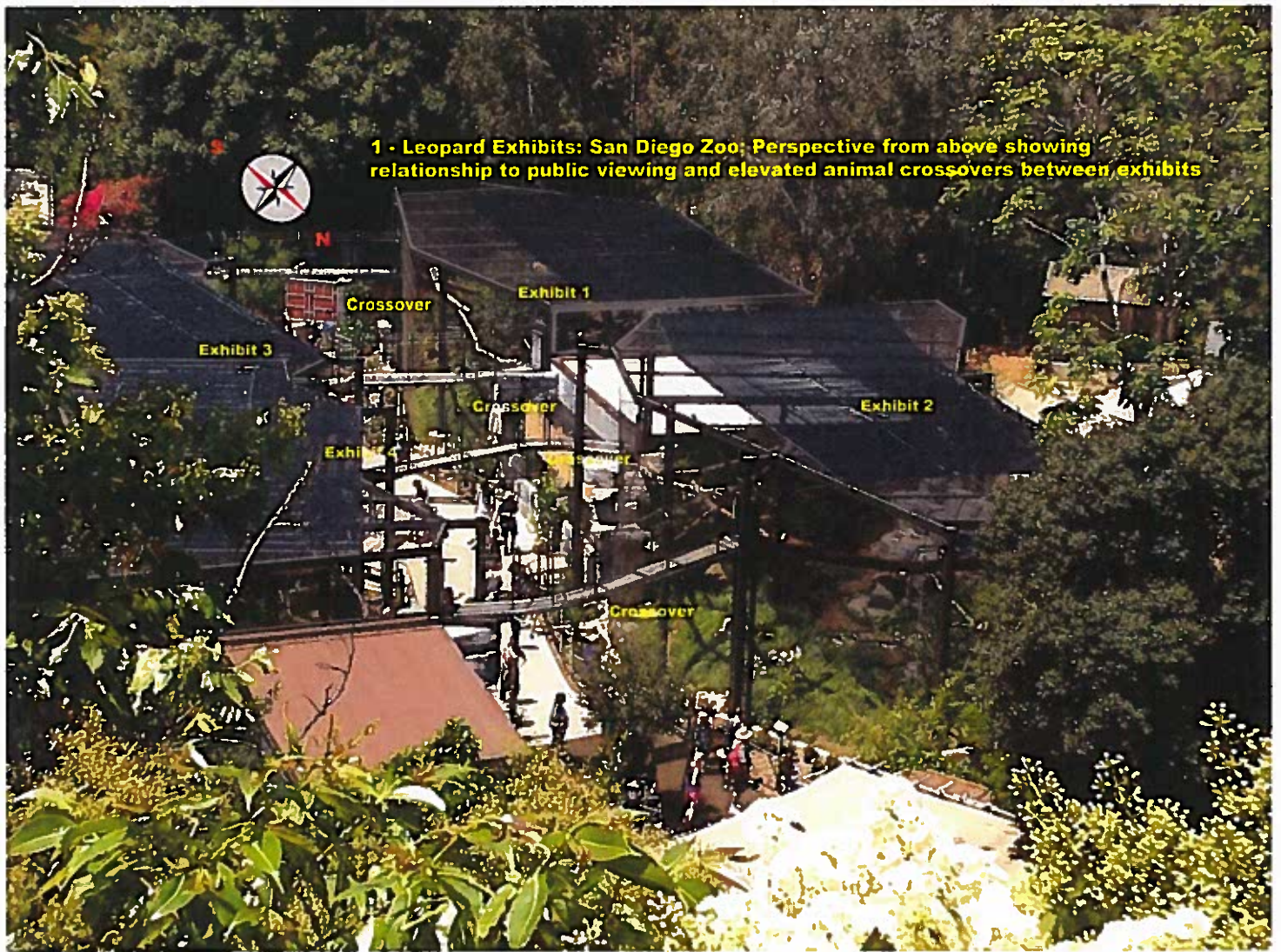
The walls of all management spaces are a combination of cement block and heavy wire mesh.

The substrate in all eight management spaces is well drained cement that can have organic material added over the top if ever needed.

Relationship of Leopard Exhibit to Public Areas

Public viewing of the leopards is achieved from a 12' wide pathway that is located between Exhibits 1 and 2 on the west side of the complex and Exhibits 3 and 4 on the east side of the complex. A railing along the wire portions of the exhibits keeps people a minimum of five feet from the exhibits. Glass viewing for the public is provided into each building. The glass viewing portions can be screened from view if necessary.

A variety of educational graphics are provided along the public pathway. See pictures 1 – 8, 51 - 54.





9 - Exhibit/Habitat1(b)



10 - Exhibit/Habitat2(a)



11 - Exhibit/Habitat2(b)



12 - Exhibit/Habitat3(a)



25 - Animal Care
access to Building A



26 - Animal Care Entrance
Doors-Building A



27 - Door from Safety to
Kitchen Building A



28 (a) - Main Kitchen Building A



28 (b) – Main Kitchen
Building A



29 – Keeper Service
Door to exhibit



30 – Typical Door from
kitchen to bedroom
hallway



31 – Typical Management
Space Hallway



32 – Typical Slider Door Mechanism



33 – Typical Management Space (a)



34 – Typical Management Space (b)



35 – Typical Management Space (c)



44 - Squeeze/Huggers for buildings B & C



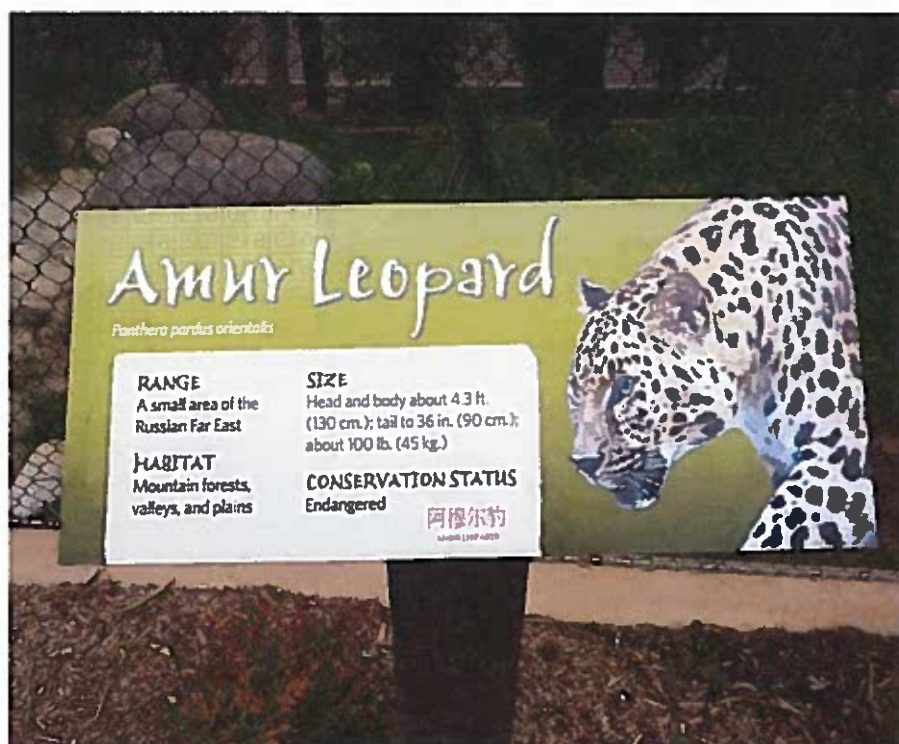
45 - Keeper field kitchen area for buildings B & C



46 - Typical door to exhibits for major maintenance for exhibits/habitats 1-4



47 - Ground level transfer chute between habitat 3&4



54 - Graphic 4

Leopard Exhibits San Diego Zoo

Exhibit 1 dimensions

54' l x 32' w x 18' h

1728 sq ft or 31,104 cu ft

Exhibit 2 dimensions

60' l x 24' w x 18' h

1,440 sq ft or 25,920 cu ft

Exhibit 3 dimensions

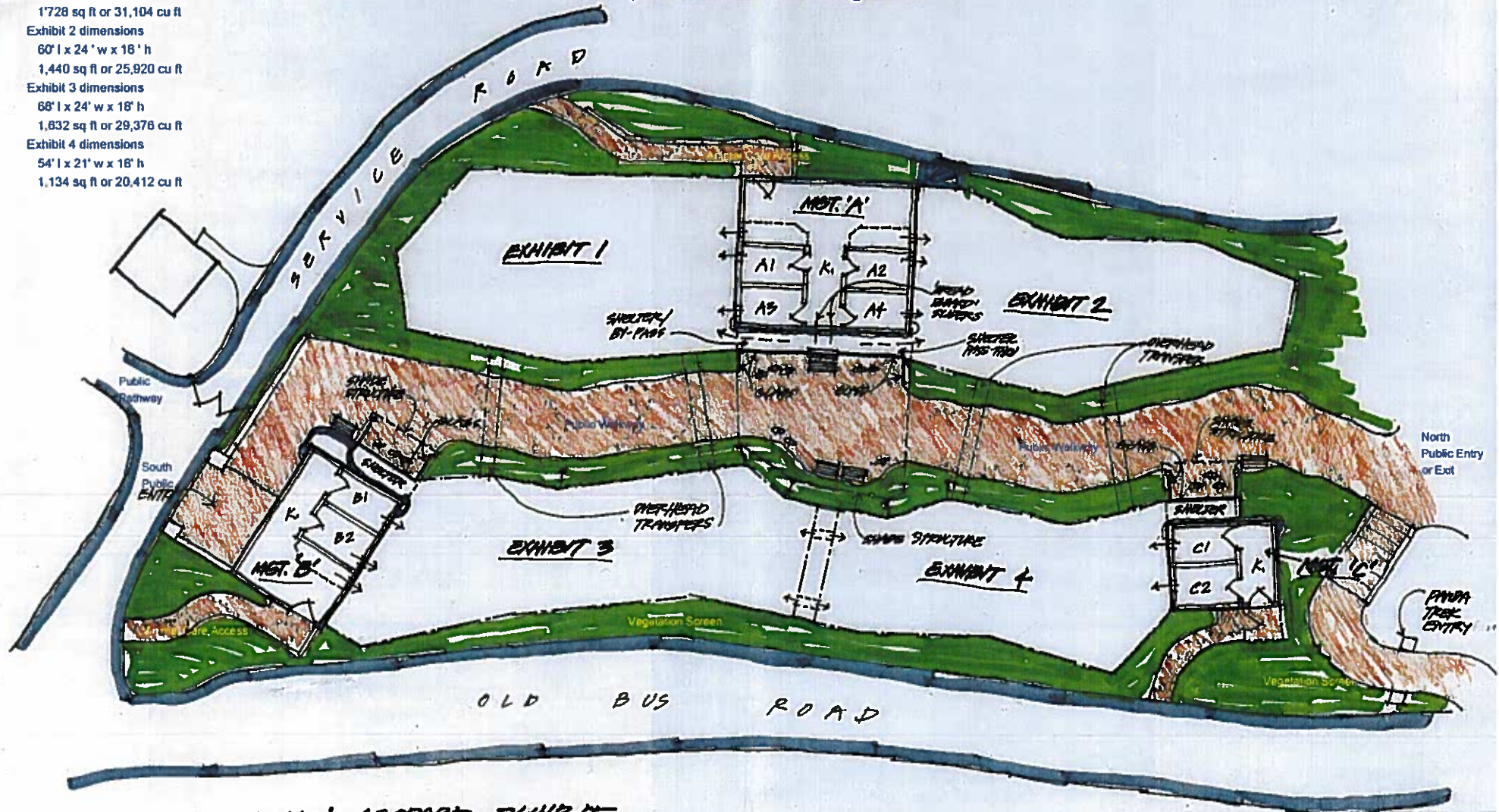
68' l x 24' w x 18' h

1,632 sq ft or 29,376 cu ft

Exhibit 4 dimensions

54' l x 21' w x 18' h

1,134 sq ft or 20,412 cu ft



ASIAN LEOPARD EXHIBIT

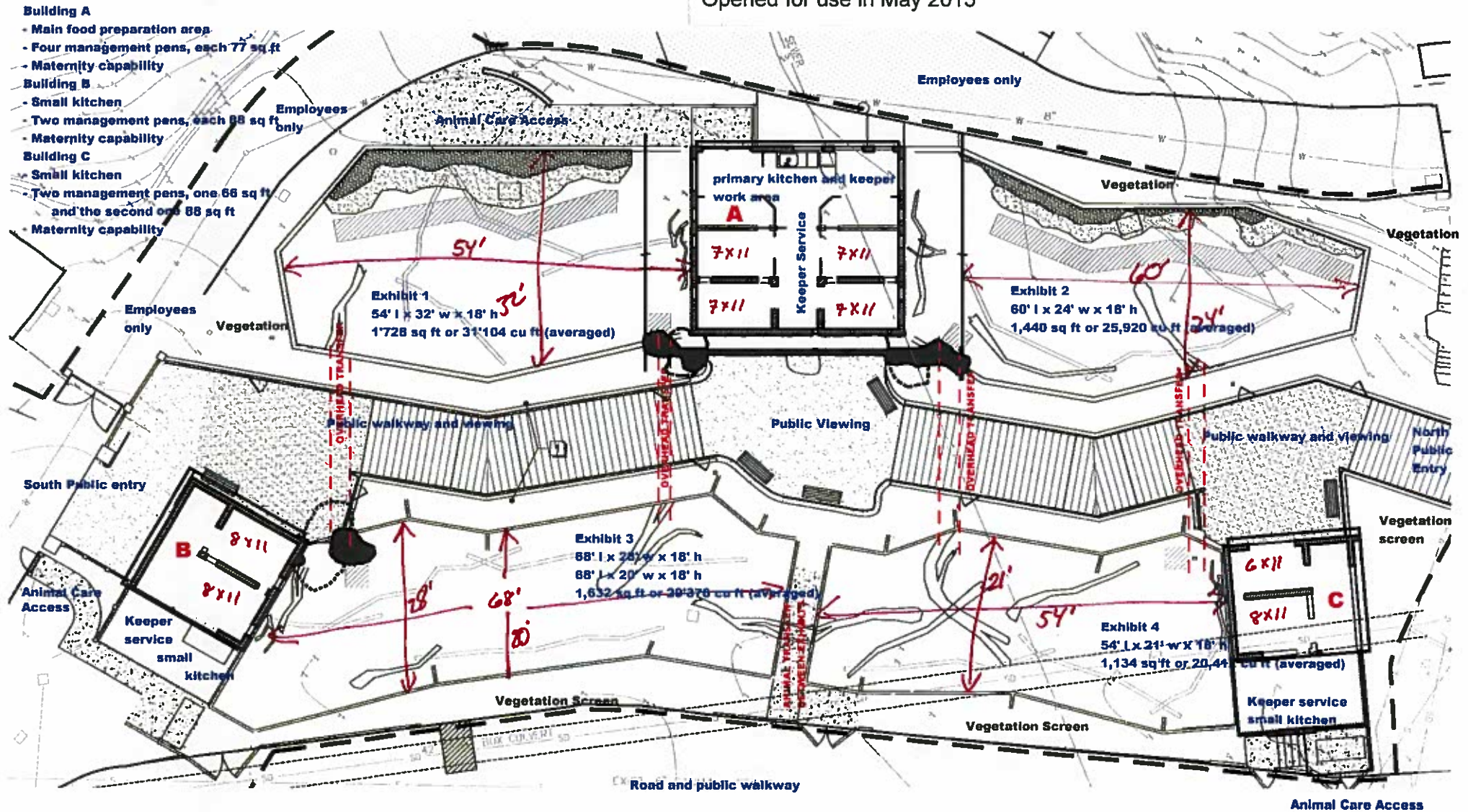
APRIL 29, 2014

1/2" = 10' 0"

0 5 10 20 feet

2005/10/10

Leopard Exhibits at San Diego Zoo Opened for use in May 2015



Question 9a



QUESTION 76
96

SAN DIEGO ZOO GLOBAL: SAN DIEGO ZOO

The expertise of the senior, professional Collections Husbandry Science curatorial, animal care and management staff is indicated as follows. Animal care management experience indicated includes field and animal management experience.

LIFE SCIENCES

Chief Life Science Officer	Robert J Wiese 26years experience
Director of Collections	Stacey Johnson 27 years experience

CURATORIAL STAFF COLLECTION MANAGEMENT

Director of Collections Husbandry Science Curator of Mammals	Carmi G. Penny 44 years experience
Curator of Birds	Dave Rimlinger 37 years experience
Curator of Primates	Dean Gibson 37 years experience
Curator Animal Care Training	Gary Priest 39 years experience
Associate Curator Behavior Management	Nicki Boyd 23 years experience
Associate Curator Entomology	Marjory Paige Howorth 18 years experience
Associate Curator Herpetology	Kim Lovich 27 years experience
Associate Curator of Mammals	Curby Simerson 35 years experience
Associate Curator of Elephants and Animal Welfare Specialist	Greg Vicino 21 years experience
Animal Care Facility Specialist	Charles Edward Lewins 20 years experience

July 2015

COLLECTIONS HUSBANDRY SCIENCE DIVISION STAFF

See following list of management/supervisory for mammals and associated collections (includes time on SDZ staff and past experience). The animal care personnel are each cross-trained in several areas, in order to provide a consistent, high standard of management and care for the mammal collection.

Animal Care Management (Animal Connections):

Kristi Lee Dovich (Manager)
Richard Schwartz (Manager)
Kathy Marmack (Supervisor)
Charmaine Hook (Supervisor)
Clint Lusardi (Supervisor)

Animal Care Management (Birds):

Joseph Kuhn (Manager)
Pat Whitman (Supervisor)
Amy Flanagan (Supervisor)
Nicole Lagreco (Manager)

Animal Care Management (Entomology):

Kelli Walker (Lead Keeper)

Animal Care Management (Herpetology):

Brett Baldwin (Manager)

Animal Care Management (Mammals):

Matt Akel (Manager)
Jill Andrews (Manager)
Chris Hamlin Andrus (Manager)
Gaylene Thomas (Supervisor)
Mike Langridge (Supervisor)
Ann Alfama (Supervisor)
Lisa Martin (Supervisor)



QUESTION 7b

9b

SAN DIEGO ZOO VETERINARY SERVICES RESOURCES

Veterinarians:

Patrick J. Morris
Director of Veterinary Services
BS (Zoology), DVM, DACZM

Meg Sutherland-Smith
Veterinary Clinical Operation Manager
Bachelor's of Science, Master's in Biochemistry,
Doctor of Veterinary Medicine

Beth Bicknese MPVM, DVM
Senior Veterinarian

Deena Brenner, DVM, Dipl. ACZM
Senior Veterinarian

Cora Singleton, DVM
Associate Veterinarian

Benjamin Nevitt, DVM
Associate Veterinarian

Registered Veterinary Technicians:

Marianne Zeitz
Senior Registered Veterinary Technician

Jeffrey Turnage
Registered Veterinary Technician Coordinator

Brian Opitz
Senior Registered Veterinary Technician

Jill Kuntz
Senior Registered Veterinary Technician

March 2015



INSTITUTE FOR CONSERVATION RESEARCH: ICR

Wildlife Disease Laboratories

The Wildlife Disease Laboratories Division consists of three laboratories—Clinical Pathology, Necropsy, and Molecular Diagnostics—that work together to investigate and resolve animal health problems that affect the Zoological Society's collection and field conservation programs. The staff includes five board-certified veterinary pathologists (two Ph.D.s), one postdoctoral pathology fellow and one resident, three pathology technicians, three clinical laboratory technicians, one laboratory manager, and one research technician are on staff. These individuals are available for disease diagnostics and surveillance and to assist in development of appropriate animals health and management plans. The pathology department includes the only laboratory in the world dedicated solely to the development and utilization of molecular diagnostic tests for the study of natural diseases in non-domestic animals.

Applied Animal Ecology

The Applied Animal Ecology Division of the Institute focuses on large-scale conservation programs that assist in the recovery of endangered and threatened populations. The Division often targets flagship species that can also serve as ambassadors for endangered ecosystems. Towards this end, its conservation programs include significant educational outreach, recognize and accommodate the culture and economic needs of local communities, and involve local, national, and international collaborations. Several research strategies are used, but most involve the application of scientifically acquired behavioral and ecological knowledge to solve conservation problems.

Behavioral Biology

The Behavioral Biology Division of the Institute documents factors regulating variation in reproductive success among animals. To achieve this goal, the research program incorporates a multi-disciplinary perspective designed to address issues arising from evolutionary biology, contribute to the captive management of populations, and facilitate efforts in conservation biology that involve preservation of animals and their natural habitats.

Genetics

The Genetics Division of the Institute develops and utilizes technologies to provide important new insights relevant to the assessment, monitoring, and management of endangered species in captivity and in the wild. Capacity building for and transfer of technology to countries with significant wildlife resources is an integral part of the division's activities.

Endocrinology and Reproductive Physiology

The Reproductive Physiology Division of the Institute supplies innovative science and technology to the conservation of genetic diversity through enhanced reproduction of endangered species. This Division also focuses on expanding understanding of the reproductive biology of exotic species through non-invasive hormone monitoring.

Applied Plant Ecology

The Applied Plant Ecology Division of the Institute focuses on the conservation, sustainable management and restoration of ecosystems worldwide. Projects will link applied research, conservation outreach, education and capacity building activities to support conservation of threatened habitats and promote sustainable management. Activities include applied research, data sharing, technology transfer, workshops, field demonstrations, and community-based conservation activities.

March 2015

Curriculum Vitae

Contact Information

Chris Hamlin Andrus

[REDACTED] San Diego, Ca. 91977

email: chamlin@sandiegozoo.org

Academic Degrees

[REDACTED]
Animal Care Manager San Diego Zoo Global, San Diego, CA

Responsible for the daily management of an assigned animal collection to ensure safe care and handling of said collection. Responsibilities also include the management of assigned staff members including management of personnel issues, personnel selection, time keeping and attendance and budgetary and area development. Assist in developing and modifying exhibits. Direct report to Associate Curator of Mammals and management of assigned Animal Care Supervisors. Ensure effective interdepartmental communications and act as effective liaison between appropriate departments.

[REDACTED] Zoological Society of San Diego, San Diego, CA
Animal Care Supervisor

Responsible for the daily supervision of an assigned animal collection to ensure safe care and handling of said collection. Responsibilities also include the supervision of assigned staff members including management of personnel issue, personnel selection, time keeping and attendance and budgetary and area development. Assist in developing and modifying exhibits. Ensure effective interdepartmental communications and act as effective liaison between appropriate departments.

[REDACTED] Zoological Society of San Diego, San Diego, CA
ZSSD Team Education & Conservation Program Manager

Responsible for coordinating both long-term breeding and short-term education loans from the initial inquiry of an interested institution through the numerous stages required in order too achieve a successful loan. Organize and track yearly budget and billing process. Generate and submit necessary permits. Perform facility inspections prior to animal shipments. Work in collaboration with ZSSD CRES Behavioral Research Department and ZSSD Education Department.

[REDACTED] Zoological Society of San Diego
Team Area Lead Koalas

Responsible for the daily care and management of an assigned animal collection containing the majority of the institutions marsupial collection. Responsible for the daily scheduling and supervision of assigned staff. Acting point person for appropriate departments. Oversee exhibit maintenance and safety standards.

Mammal Keeper

Zoological Society of San Diego

Responsible for the daily care of a designated group of animals, which includes daily evaluation of each individual's general fitness, mental and physical condition. In charge of keeping accurate and up to date records. Implement daily appropriate enrichment. Maintain safe and appropriate exhibits.

Educator

Zoological Society of San Diego

Responsible for providing educational and informative interruptive tours and programs to Society members, convention groups, school groups and VIP tours. Participated in various outreach programs. Worked with a variety of educational animals for public educational presentations.

Professional Qualifications

- Participated in keeper exchange program to Currumbin Sanctuary, Queensland Australia, November 1995 – April 1996, where I was assigned to the care of 1.1 Tasmanian Devil breeding pair.
- In charge of the daily care of 1.1 Tasmanian Devil breeding pair at the Zoological Society of San Diego from Nov 1997 – Nov 1999.
- North American Regional Studbook Keeper for the Northern and Southern Koala.
- North American Koala SSP Coordinator.
- AZA Marsupial & Monotreme Taxon Advisory Group Vice Chair.
- Attended AZA School Population Management I in April 2005.
- Participant in koala census field research in: 1994, 1995, 1997, 1998 and 2007.
- ZSSD Institutional Representative for Goodfellow's Tree Kangaroo.
- ZSSD Institutional Representative for Parma Wallaby.

Publications / Papers

- Hamlin Andrus, Chris (1996) Developmental Milestones in Captive Goodfellow's Tree Kangaroos (*Dendrolagus goodfellowi*) San Diego Zoo. San Diego CA. Tree Kangaroo Husbandry Manual 2001. Chapter 7 Appendix A-1.
- Andrus, Chris (co author) (2005) Maternal effort and joey growth in koalas (*Phascolarctos cinereus*). Journal of Zoology accepted 1 August 2005.
- Andrus, Chris (co author) (2006) Mating patterns and reproductive success in captive koalas (*Phascolarctos cinereus*). Journal of Zoology accepted 9 March 2006.

Professional Affiliations

- AAZK San Diego Chapter Member
- AZA Member
- ARAZPA Member

Gaylene Thomas
Animal Care Supervisor
Collections Husbandry Science Department
San Diego Zoo

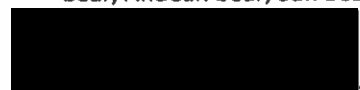
Professional Experience



San Diego Zoo Global, San Diego, CA

Animal Care Supervisor

Responsible for the daily supervision of an assigned animal collection and staff to ensure safe care, effective husbandry, and overall best practices in animal care. Responsible for the assignment of animal care in support of a variety of Carnivore based research projects conducted in collaboration with San Diego Zoo Institute for Conservation. Collection emphasis on carnivores including: Malayan tiger, Lion, Snow leopard, Clouded leopard, Amur leopard, North Chinese leopard, Cougar, Jaguar, Polar bear, Grizzly bear, Andean bear, Sun bear, Giant Panda bear, Sloth bear.



Zoological Society of San Diego, San Diego, CA

Mammal Keeper, Bird Keeper

Responsible for the daily care and management of an assigned animal collection. Responsible for the daily scheduling and supervision of assigned staff. Acting point person for appropriate departments. Oversee exhibit maintenance and safety standards. Support and participate in Carnivore based research projects conducted in collaboration with San Diego Zoo Institute for Conservation. Collection emphasis on large carnivores and ungulates.

Professional Affiliations

- AZA Member
- PBI Member
- IBA Member

Jacob Shanks
Lead Keeper - Carnivores
Collections Husbandry Science Department
San Diego Zoo

Professional Experience

Jacob Shanks has worked as a keeper with carnivores since 2001. During his time as a keeper he has worked with many species of big cats, bears and others to include leopards (Amur, Persian, North Chinese), tigers, lions, jaguar, snow leopards, giant panda, sun bears, sloth bears, polar bears, spotted hyena, red wolves, and many others species. Jacob's duties as a keeper have included all day to day maintenance (feeding, cleaning, enrichment, training, behavioral observation etc.) as well as breeding and introductions. Jacob has participated in numerous carnivore introductions and has many years of experience working with breeding individuals and subsequent cubs. The last two years he has worked as the lead keeper overseeing a large portion of the San Diego Zoo's carnivore collection.

Todd Spies
Senior Keeper - Carnivores
Collections Husbandry Science Department
San Diego Zoo

Professional Experience

Todd [REDACTED] experience. From [REDACTED] Todd was a Keeper II at the Pueblo Zoo, Pueblo, CO. From 2001 [REDACTED] he was Animal Care Manager at the Binghamton Zoo At Ross Park, Binghamton, NY. Since [REDACTED] he has filled the position of Senior Keeper at the San Diego Zoo. Todd has experience caring for carnivores throughout his career, focusing on carnivores for the past 9 years, and specializing in cats for the past 6. He has extensive experience in all aspects of carnivore husbandry including, general care, training, enrichment, breeding, transport, and exhibit design. Todd's experience includes over 5 years of work with Amur leopards. His carnivore experience includes work with a wide variety of cats (3 subspecies of leopard, snow leopard, jaguar, cougar, lynx, Amur tiger, caracal, etc.), bears (sun bear, spectacled bear, grizzly bear, giant panda, etc.), and an assortment of other carnivores (spotted hyena, maned wolf, red wolf, grey wolf, fossa, red panda, binturong, swift fox, etc.). Todd received a B.S. degree in Zoology from Northern Arizona University, Flagstaff, AZ and have successfully completed the AZA Felid Taxon Advisory Group felid husbandry course and the AZA creating successful exhibits course.

Kelly Murphy
Senior Keeper - Carnivores
Collections Husbandry Science Department
San Diego Zoo

Professional Experience

Kelly Murphy is a senior keeper that has been employed by the San Diego zoo for over 22 years. The bulk of Kelly's experience has been working within the carnivore team where she has fulfilled the role of a primary keeper, a relief keeper as well as relief lead. Kelly has worked with six of the eight bear species currently in the collection as well as a number of small and large cats. Some examples include: Snow leopards, Amur leopards, Chinese leopards, Jaguars, Lions, Tigers, Cougars, Lynx, Servals, Caracals, Fishing cats, Pallas cats, and Wild cats.

Question 76

9cde.

9. c. Institutional Length of Experience with leopards

1. Amur leopard – 2011 to 2016 (5 years)
2. North Chinese Leopard – 1964 to 2014 (40 years)
3. Persian Leopard – 1983 to 1996 (13 years)
4. Snow Leopard – 1949 to 2016 (67 years)

9. d. Leopard or related species births in the last 5 years.

No births have been recorded in the last 5 years in compliance with AZA leopard program recommendations.

9. e. Leopard deaths in the last 5 years, cause of mortality and preventative actions taken

Two deaths have been recorded as follow:

Amur leopard, Male, Studbook # 809 – date of death 7 July 2015: Cause of death was euthanasia because of lymphoma. There is no preventative action possible to prevent lymphoma in other leopards.

Preliminary Dx:

1. Euthanasia
2. Mediastinal and abdominal masses; probable lymphoma based on preliminary cytologic examination
3. Good body condition

FINAL DX:

1. EUTHANASIA
2. CECUM, DIAPHRAGM, AND LYMPH NODES (STERNAL, PANCREATIC AND MESENTERIC): LYMPHOMA
3. STOMACH: MINERALIZATION, MUCOSAL, DIFFUSE, MODERATE
4. KIDNEY, MEDULLARY TUBULES: MINERALIZATION, MULTIFOCAL, MINIMAL
5. MESENTERY: EOSINOPHILIC GRANULOMAS, MULTIFOCAL, MILD
6. SMALL INTESTINE, MULTIPLE SEGMENTS: ENTERITIS, EOSINOPHILIC, MINIMAL TO MILD
7. LYMPH NODE, SITE UNSPECIFIED: SINUS HISTIOCYTOSIS AND EOSINOPHILIC INFILTRATES
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Determination of individual requirements remains under the discretion of the clinician managing the case. Implementation of the ideal preventative medicine program can be affected by the constraints of zoological medicine practice which include species temperament and fragility, and resource allocation. Risk versus benefit analysis aids in determining the degree of implementation for each individual.

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Carnivores – Felids (Cats)

Routine examinations: Regular health monitoring should be performed opportunistically or as needed based on the animal's age, life stage, health status, or other factors.

Procedures

1. Review medical records and research requests
2. Verify or place transponder / tattoo
3. Confirm sex
4. Obtain body weight
5. Ophthalmic exam
6. Physical exam and BCS – visual exam if behavioral restraint used
7. Dental exam and prophylaxis – assess need during visual exam if under behavioral restraint
8. Nail trim
9. Review contraception and need for reproductive examination (Contraception Advisory Group Recommendations)
10. Review SSP recommendations for cheetah (Health_Chapter_Cheetah_SSP_2007_Final.doc)
 - a. Esophageal-gastric endoscopy
 - i. Gastric biopsy – Helicobacter histopathology and PCR
 1. Fibrosis – prognosis
 - ii. Hiatal hernia diagnosis

Diagnostics – Blood

1. CBC and biochemical profile
2. Serum bank
3. Serology
 - a. FIV, FeLV, FCoV, Toxoplasma, and canine distemper
6. Vaccine serology: Feline parvovirus, herpesvirus (cheetahs only), calicivirus (case-by-case basis), and rabies titers. Rabies serology once and can be discontinued once it is documented an individual has responded appropriately to vaccination. Animals that do not mount a protective titer should receive a booster.
4. Heartworm test (antigen)
5. Taurine/carnitine (on hand-raised cubs only)

Diagnostics – Feces

1. Feces for ova and parasite screen
2. Feces for coronavirus PCR – cheetah (paired with serum [and EDTA blood if can overnight])

Diagnostics – Urine

1. Urinalysis (save aliquot for urine protein:creatinine, electrolytes, and C&S)
2. Consider urine endogenous creatinine clearance in cheetah

Diagnostics – Imaging

1. Thorax/ abdomen (including pelvis) radiographs
2. Dental radiographs if indicated
3. Cardiac and abdominal ultrasound if indicated
4. Urinary bladder Ultrasound- fishing cats
5. Digital photography if indicated

Diagnostics – Other

1. ICR / other research samples
2. Morphometric measurements if requested

Potential prophylactic treatments for clinician consideration – please check parasite control program to avoid double dosing

1. Anthelmintics to choose from:
 - a. Ivermectin (Ivomec) 0.2 – 0.4 mg/kg SQ, PO
 - b. Selamectin (Revolution) 6 mg/kg topically (also does heartworm, fleas, ticks, mites [except Demodex])
 - c. Fenbendazole (Panacur) 50 mg/kg PO SID x 3d or 20 mg/kg PO SID x 5d
 - d. Pyrantel (Strongid) 5 mg/kg PO

Determination of individual requirements remains under the discretion of the clinician managing the case. Implementation of the ideal preventative medicine program can be affected by the constraints of zoological medicine practice which include species temperament and fragility, and resource allocation. Risk versus benefit analysis aids in determining the degree of implementation for each individual.

Updated 14July2014 v05-02

SDZ6 Mammalian Preventive Medicine Program

- e. Praziquantel (Droncit) according to packaging (tapeworms only).
- f. Milbemycin 2 mg/kg PO
2. Heartworm preventative medication (not currently being done at SAFARI PARK, currently done at Sacramento Zoo)
 - a. Ivermectin 24 µg/kg PO monthly
 - b. Or Selamectin (Revolution) 6 mg/kg topically monthly
 - c. Or Milbemycin (Interceptor) 2.0 mg/kg PO monthly (also does Demodex 1-2 mg/kg PO SID)
3. Flea and Tick control (not currently being done at SAFARI PARK except on a case by case basis)
 - a. Lufenuron (Program) 30 mg/kg PO monthly (fleas only)
 - b. Or Imidacloprid (Advantage) topically monthly according to packaging.
 - c. Or Fipronil (Frontline) topically monthly according to packaging
 - d. Or Selamectin (Revolution) 6 mg/kg topically monthly
4. Vaccination - SDZ protocols

Felidae	Kittens	1 st Booster	Adult booster
killed FPV, FCV, & FHV	(6, 8) 12, 16 wks	1 year later	every 3 years
Imrab3	12 wks	1 year later	every 3 years

Core vaccines for felines - Safari Park protocols

Felidae	Kittens/Cubs (3 doses)	1 st Booster	Adult booster	Serology
FPV-killed	(5-6)* 8, 12, 16 wks Cheetahs/others as needed: 5-6, 9, 12, 15-16 wks	1 year later Cheetahs: 6 mos and 1 yr of age	every 3 years Cheetahs: every 1-3 yrs; 3 wks pre-partum	Opportunistically to confirm immunity
FCV-killed	(5-6)* 8, 12, 16 wks, only if also giving CPV	1 year later Cheetahs: 6 mos and 1 yr of age	every 3 years Cheetahs: every 1-3 yrs; 3 wks pre-partum	Not necessary (except for cheetahs) unless needed for diagnostic purposes (titers do not correlate with protection).
FHV-killed	(5-6)* 8, 12, 16 wks	1 year later Cheetahs: 6 mos and 1 yr of age	every 3 years Cheetahs: every 1-3 yrs; 3 wks pre-partum	Not necessary (except for cheetahs) unless needed for diagnostic purposes (titers do not correlate with protection)
rCDV (<i>Panthera</i> and <i>Lynx</i> only)	(5-6)* 8, 12, 16 wks	1 year later	every 3 years	Opportunistically to confirm immunity
Rabies - killed virus (Imrab3)	12-16 wks	1 year later	every 3 years	Rabies serology at SP once and can discontinue checking once it is documented an individual has responded appropriately to vaccination. Not necessary to monitor antibody levels (very effective vaccine).

*Animals at high risk for viral infection (i.e. those with low maternally-derived antibody (MDA) or increased likelihood of exposure) should have the series initiated sooner, i. e. 5-6 wks, for a total of 4 doses.

Additional procedures:

- Refer to each institution's Parasite Control Plan and other preventive care protocols
- Blood collection quarterly in conditioned animals to maintain behavior

Determination of individual requirements remains under the discretion of the clinician managing the case. Implementation of the ideal preventative medicine program can be affected by the constraints of zoological medicine practice which include species temperament and fragility, and resource allocation. Risk versus benefit analysis aids in determining the degree of implementation for each individual.

Updated 14July2014 v05-02

Preshipment procedures:

- Same procedures as for routine exam plus additional procedures and diagnostics as decided by the Outgoing Shipment veterinarian and / or the Receiving Institution

Quarantine procedures:

- Quarantined for a minimum of 30 days or as determined following an internal assessment of risk (includes a review of SDZG necropsy data, a review of diseases of concern at SDZG, and a review of the diseases of concern at the Sending Institution).
- Same procedures as for routine exam plus placement of transponder. Preferred location: [transponder_statement_2010.pdf](#)
- Same diagnostics as for routine exam, 3 x weekly feces for ova and parasite screen

Neonatal / pediatric procedures:

- A point DVM will be assigned to each litter following the birth. This assignment will be made by the dDVM who is first made aware of the birth. The point DVM is responsible for discussing the rearing strategy with the ACS/ACM, determining which procedures/components of the preventive health protocol should happen at which vaccine, determining if/when anesthesia is necessary, and determining if/when blood should be collected. Lead RVT can schedule the procedures in consultation with the point DVM. This same DVM should be assigned to the full vaccination series to improve consistency of care during this critical time period.
- Additional items for consideration by the point DVM:
 - Is anesthesia needed as part of the third vaccine series for exam and blood collection?
 - It is preferable to do the exam, vaccines and blood collection on separate days to reduce stress?
 - Will these cubs be Animal Ambassadors and what are the special considerations we need to be aware of?
 - If dam-reared, should we waive blood collection entirely to reduce stress?
 - Is there a high risk that the dam might reject the cubs? If so, DVM and ACS/ACM need to discuss up front and communicate needs.
 - Point DVM needs to prevent prolonged stress on cubs and should be aware that these delicate scenarios may not be appropriate training opportunities.
- Examinations
 - Physical exam, body weight, fecal collection for parasite screen, blood collection if possible (CBC, chem., serum bank, viral serology), vaccinations (see below), anthelmintics (see below) plus, transponder placement, and treatment for fleas (e.g. topical fipronil) if needed opportunistically. These procedures can be done at separate times but it is advantageous to do exams and transponder placement when animals are small and easier to handle. Blood collection can be waived at the discretion of the DVM if anesthesia is required on a case by case basis. If blood collection is considered too stressful, consideration should be given to anesthesia to facilitate blood collection and thorough physical examination.
 - *Alternate protocol* (Safari Park): To facilitate behavioral conditioning and management concerns, cubs at the Safari Park may be on the following schedule
 - 6 weeks: physical exam, body weight, fecal collection for parasite screen, transponder placement, blood collection if possible (CBC, chem., serum bank, viral serology), vaccinations (see above), and anthelmintics (see below).
 - 9 weeks: body weight, fecal collection for parasite screen, blood collection if possible (CBC, chem., serum bank, viral serology), vaccinations (see above), and anthelmintics (see below).
 - 12 weeks: body weight, fecal collection for parasite screen, vaccinations (see above), and anthelmintics (see below) and treatment for fleas (e.g. topical fipronil).
 - 16 weeks: vaccinations only (if indicated by previous serology)
 - 1 yr 4 months (Cheetahs: 1 yr of age): First preventive medicine examination under anesthesia to coincide with FVRCP and first rabies boosters. Thereafter, routine preventive exams approximately every three years or as needed (may not be necessary in young animals).
- Vaccinations: See above
- Anthelmintics
 - Monthly from 3 - 6 months of age if needed, then as indicated by routine fecal testing
- Heartworm prevention
 - Start at 6-8 weeks of age (not currently being done at the Safari Park or SDZ)

Determination of individual requirements remains under the discretion of the clinician managing the case. Implementation of the ideal preventative medicine program can be affected by the constraints of zoological medicine practice which include species temperament and fragility, and resource allocation. Risk versus benefit analysis aids in determining the degree of implementation for each individual.

APPENDIX V

H 10: Transport Arrangements and Description

CONTAINER REQUIREMENT 72

The illustrations shown in this Container Requirement are examples only. Containers that conform to the principle of written guidelines for the species but look slightly different will still meet the IATA standards.

Applicable to:

Bear species
Binturong
Cheetah
Jaguar
Leopard species
Lion species
Panther species
Puma species
Snow leopard
Tasmanian devil
Tiger

Note:

The above species must be provided with space to lie comfortably but not turn around, except for bear species and binturong which must have space to turn around. There must be at least a 10 cm (4 in) clearance around the animal when standing in a normal position. For polar bears only, containers must be of sufficient size to allow the animal to turn around freely in a four paw stance, to sit in an upright position, and to lie down in a natural position with all body parts contained within the crate.

Note:

Should a veterinary certificate be provided stating that the large cat being shipped is suitable to be transported in a container which permits it to turn around, that container may be accepted for shipment.

STATE VARIATIONS: GBG-01/02/03/04,
USG-Variations

OPERATOR VARIATIONS: GF-07, QF-01, SV-01

1. CONTAINER CONSTRUCTION

Materials

Hardwood, metal, 1.3 cm minimum (1/2 in) plywood or similar material, welded mesh, iron bars.

Principles of Design

The following principles of design must be met in addition to the General Container Requirements outlined at the beginning of this chapter.

Dimension

The height of the container must allow the animal to stand erect with its head extended and the length must permit it to lie in the prone position. The measurements will vary with the species involved.

Frame

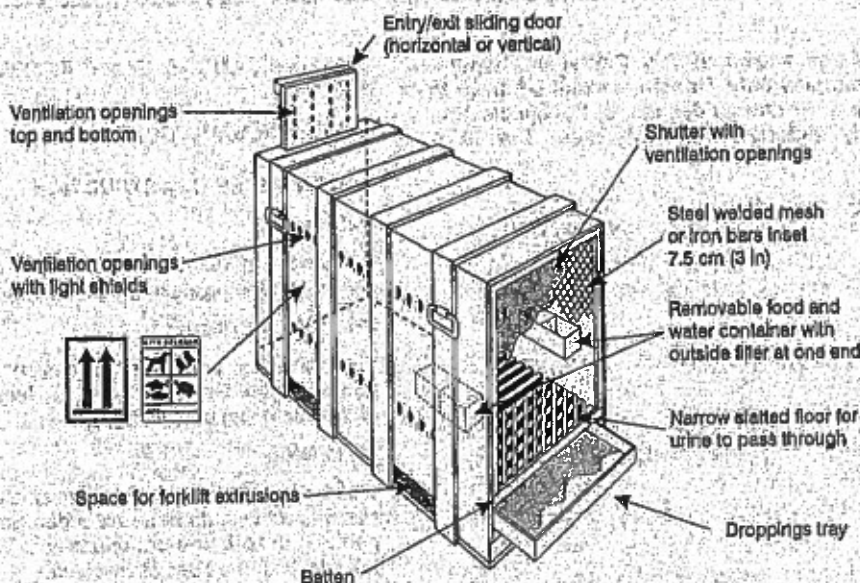
The frame must be made from solid wood or metal bolted or screwed together. The frame must provide the spacer bar requirement of 2.5 cm (1 in) depth to the sides for air circulation. When the weight of the container plus animal exceeds 60 kg (132 lb), or the animal is very aggressive the frame must have additional metal re-enforcing braces.

Sides

Suitable plywood or similar material must line the frame to give a smooth and strong interior.



EXAMPLE:



Floor

The floor must either be constructed in a narrow slatted form over a liquid proof tray in such a manner that all the excreta falls onto the tray or, if a slatted floor is not required for that species, it must be leak-proof and covered by sufficient absorbent material in order to prevent any excreta escaping.

When slats are used, they must be resistant to destruction by the animal. Expanded metal may be preferable with some species.

Roof

Must be solid.

Doors

Sliding or hinged entry/exit door must be provided. The front entry/exit door and the opposite end must be made of welded steel mesh or strong iron bars. The iron bars must be spaced in such a way that the animal cannot pass its legs between them.

Alternatively, the front entry/exit door may be made from heavy plywood, steel lined, with ventilation openings, while the end is made of welded steel mesh or strong iron bars. When welded steel mesh or strong iron bars are used, they must be covered with a light sliding wooden shutter. The upper two thirds of the shutter must have either ventilation openings of 10 cm (4 in) or slats with 7 cm (2 3/4 in) spaces between them, in order to reduce the disturbance to the animal and to protect the handlers.

The mesh or bars may also be covered with burlap or similar material instead of the shutter.

The door must be fastened with screws or bolts in order to prevent accidental opening.

Ventilation

Ventilation openings must be placed at heights that will provide through ventilation at all levels, particularly when the animal is lying down in a prone position. Exterior meshed ventilation openings, with a minimum diameter of 2.5 cm (1 in), must be made on the sides, entry door and roof, as shown in the illustration.

Spacer Bars/Handles

Must be made to a depth of 2.5 cm (1 in), and formed from the framework of the container.

Feed and Water Containers

Food and water containers must be fixed off the floor, to prevent soiling, at the front of the container. Safe outside access must be provided for filling in emergency.

Special Requirements

Bears and other strong clawing animals must have the container totally lined with sheet iron or other hard metal sheeting with ventilation openings punched through to the exterior.

Forklift Extrusions

Must be provided if the total weight of the container plus animal exceeds 60 kg (132 lb).

Multiple Containers

When more than one animal is to be carried in a container, multiples of the above requirements must apply. The container can be divided into compartments by the use of partitions made of metal grills. There must be a separate access into each compartment. Compatible animals that are not likely to harm each other during shipment need not be separated by a partition.

Container Requirements

2. PREPARATIONS BEFORE DISPATCH (see Chapter 5)

Food intake must be reduced 2 to 3 days before shipment. A light meal may be given prior to dispatch and food must be provided in case of emergency.

These species must be kept in darkened containers to avoid stimulus from their surroundings. They have the tendency to become aggressive and belligerent if disturbed by outside interference or noise.

3. FEEDING AND WATERING GUIDE (for emergency use only)

Animals do not normally require feeding or watering during 24 hours following the time of dispatch.

If feeding or watering is required due to an unforeseen delay, feed once daily, preferably late afternoon, 1 kg of

meat per 20 kg (1 lb per 22 lb) of live weight. Polar bears will also eat fish and brown bears like fish and fruit.

4. GENERAL CARE AND LOADING (see Chapters 5 and 10)

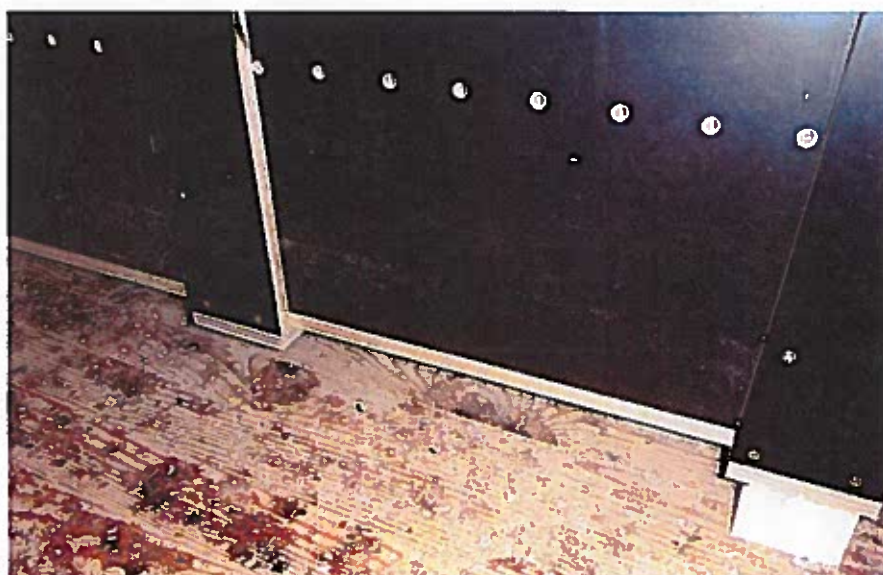
Animals covered by this Container Requirement prefer to travel in darkness or semi-darkness. For polar bears only, cargo compartment temperature and ventilation requirements should be discussed with the airline prior to the transport.

Transport at lower cabin pressure altitudes is preferable for polar bears. Special arrangements should be made with the airline prior to the transport.

Design and structure of crates to be used to ship Amur Leopards

Each have a weight of 90 kg and following dimensions : 1,30 x 0,93 x 0,55 meter





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