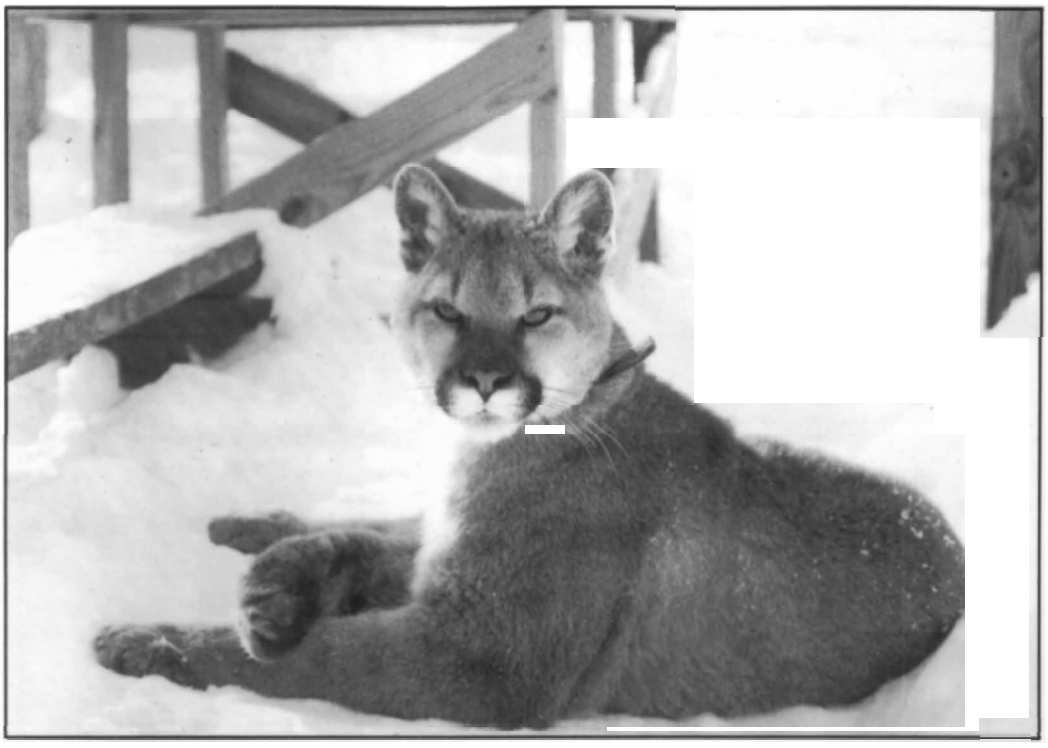
Volume 44, Issue 2 MAY/JUNE 2000

ENDANGERED SPECIES CONSERVATION FEDERATION, INC.



Aahhh, looks refreshing!
'Mercury'
South American Cougar
belongs to member, Carol Siegley, in IN
Photo taken February, 2000

LIOC
Endangered Species Conservation Federation, Inc.

This Newsletter is published bimonthly by the LIOC Endangered Species Conservation Federation, Inc. We are a nonprofit (Federal I.D. 59-2048618) noncommercial organization with international membership, devoted to the welfare of exotic felines. The purpose of this newsletter is to present information about exotic feline conservation, management and ownership to our members. The material printed in this newsletter is contributed by our members and reflects the point of view of the author but does not necessarily represent the point of view of the organization. LIOC ESCF, Inc.'s Statement of Intent is contained in our bylaws, a copy of which can be requested from the Secretary. Reproduction of the material in this newsletter may not be made without the written permission of the original copyright owners and/ or copyright owner LIOC. Since the Newsletter consists primarily of articles, studies, photographs and artwork contributed by our members, we encourage all members to submit material whenever possible. Articles concerning exotic felines are preferred and gladly accepted. Articles involving other related subjects will also be considered. Letters and responses to articles may be included in the Readers Write column. Deadline for the next issue is the first of even numbered months. Please submit all material to the Editor. Persons interested in joining LIOC should contact the Term Director in charge of Member Services.

IN THIS ISSUE

A Special Thank You to

Steve Belknap
Kelly Jean Buckley
Colette Griffiths
John Lussmyer
Alan Shoemaker
Carol Siegley
Shirley Wagner
Barbara Wilton

for contributions to this newsletter. This is YOUR newsletter. ALL contributions–new or old, long or short, technical or humorous, personal story, article, or advertisement–are welcome and needed. I'll be happy to assist with writing and/or editing. Calls, emails, or faxes are welcome.

Marge Maxwell, Editor

Visit Our Website!

http://www.lioc.org

Informational contributions may be sent to George Stowers, Vice President. Email: gstowers@twcny.rr.com . Please send computer readable text files. (Email is great, will accept ASCII text files on disk. See page 2 for address.)

A three-year-old went with his dad to see a litter of kittens. On returning home, he breathlessly informed his mother there were 2 boy kittens & 2 girl kittens. "How did you know?" his mother asked. "Daddy picked them up and looked underneath," he replied, "I think it's printed on the bottom."

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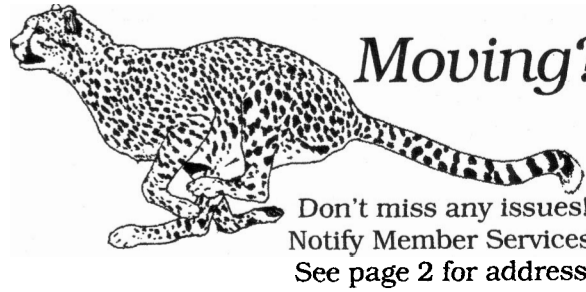


Moving?

Don't miss any issues!
Notify Member Services.
See page 2 for address, phone, or email.

LIOC Convention Raleigh/Durham, North Carolina August 9-13, 2000

Register for the 2000 LIOC Convention no later than July 10. **Please send $110.00 registration to: LIOC-ESCF, Inc., PO Box 22085, Phoenix, AZ 85028.** (Early registration has expired.) Registration for a child under 17 is $75.00. (Please send your choice of chicken or beef for the Saturday night banquet. Please advise if you are bringing a cat.)

Call the Radisson Governors Inn, to make your LIOC Convention Reservations at 919-549-8631 (weekdays, 8am-5pm), an LIOC room rate of $79.00 plus tax, each night, double occupancy. They will only hold the group rooms until July 10. Complimentary Airport shuttle service is available.

The Exotic Cats are Welcome! (Less than 30 pounds) The Radisson requires notice when you make your reservations, as to which cats you are bringing to the convention, and a room deposit of $25.00 which is non-refundable. To enter North Carolina with an exotic cat, it is necessary to have a heath certificate for each cat and bring your USDA permit if you hold one.

Convention activities will include Open Hospitality Room, General Membership Meeting, Board Member Meetings, Field Trip to Carnivore Preservation Trust and Museum of Life and Science, Speaker Presentations, Group Meals, and Award Presentation/Banquet & Auction. To register for the **Wild Feline Husbandry Course** held on August 9, please send $50.00 tuition to: LIOC-ESCF, Inc., PO Box 22085, Phoenix, AZ 85028. For information, contact George Stowers at gstowers@twcny.rr.com or 315-342-4997. In addition to the Wild Feline Husbandry course, another class will be offered on Thursday, August 10, for **Behavior Conditioning Using Operant Conditioning**. A method of training that uses positive and negative reinforcement to encourage desired behavior. Class hours are from 8:30am-12:30pm and registration will be $10.00 at the door.

Guest Speaker Presentations:

George Stowers, Vice President, LIOC-ESCF, Inc. "Private Husbandry of Wild/ Exotic Felines - The Agony and the Ecstasy"

Kelly Jean Buckley, Director Member Services, LIOC-ESCF, Inc. "Cat Survival Trust - England and Argentina"

Ton Veldkamp, Director of the Wild Cat Foundation, Holland, "Captive Wildcats in Holland"

Bill Peake, M.I.T. & Mass. Eye & Ear Infirmary/Researcher "Structional-Functional Variations Among the Middle Ears of Small Felid Species"

Debbie Walding, "In-Situ conservation, Belize project - You CAN make a difference"

Suzanne Kennedy-Stoskopf, DVM, PhD - Diplomate American College of Zoological Medicine "Emerging Viral Infections in Non-Domestic Felids"

Submitted by, Kelly Jean Buckley
kjbuck@uswest.net

Raising the Bar: The Evolution of Felid Management in Zoos
Part IV

Alan H. Shoemaker
International Leopard Studbook Keeper
Deputy Chair, IUCN Cat Specialist Group
Riverbanks Zoological Park, Columbia, SC

Remembering that Zoos are as diverse as individuals in their character and ownership, and that they must allocate space and resources taking into consideration all species, not just felids, the following is the recommendation of the Felid TAG for felid species. These recommendations are based on space available, available genetic material, and the scientific assessment of those species and subspecies "most in need", or those that stand a reasonable chance of success with the resources currently available. Ed.

AZA FELID TAG REGIONAL COLLECTION PLAN: 1998-2001

Based on the best information available on the conservation status of all species of felids in nature, coupled with husbandry issues and an analysis of total cage space available to carry out an Regional Collection Plan (RCP), the Felid TAG developed an RCP which included varying numbers of target populations for all species of large cats, and target populations for lesser numbers of small felids. This approach recommended that some species be eliminated from zoo collections. It also meant that the importation or acquisition of non-RCP species not present in captivity would not be supported by the TAG unless a suitable number of new founders could be obtained, and new spaces identified to manage the population over a long period of time. Some species were not considered, not because they are common in the wild but rather, that their present absence in captivity, coupled with their remote habitat and endangered status in the wild, made it highly unlikely that adequate numbers of founders could ever be obtained.

Large cats: All species of large felids are included in the RCP. The Felid TAG's recommendations for each species include the following:

Tiger, Panthera tigris: The SSP for tigers supports a target population of 150-160 animals for each of three subspecies. The Amur tiger (formerly called the Siberian tiger) SSP is nearly 20 years old and has functioned well with this target population, and has periodically obtained new founders from orphan situations or as F1 captive-born individuals from Europe. Its goals are not likely to change in the future. The Sumatran tiger SSP is well under its target population and additional spaces are readily available, especially in zoos located in warmer climates. Additional founders are periodically available from Sumatra via captive-bred individuals or wild-born tigers which must be removed from the wild. At this time, the Indochinese or Corbett's tiger is also included in the RCP although it is present in only four zoos. Given the small founder population

(Raising the Bar continued)
presently in the North American population, additional animals from
(Raising the Bar continued)
range-country zoos that are unrelated to those in North America are being sought. Although still present in large but declining numbers, no space is allocated for hybrid tigers (including white individuals). The sole pure-bred Bengal tiger in North America will not be replaced upon its death and that subspecies will be left to the European EEP.

Snow leopard, *Uncia uncia:* This species has functioned well with a target population of 200 animals. In addition to having a large founder base, new founders are available from captive sources in Europe and range country zoos. This species does well in captivity and in addition to be widely held by a wide variety of owners, now has a stable population in nature.

Cheetah, Acinonyxjubatus - After determining correct husbandry techniques for reproduction, cheetah populations have increased without the need for additional founders. Unfortunately, recent importations usually sought additional specimens, including "king" or *"rex "* color morphs, without regard to genetic need and often are closely related to individuals already in North America. The target population is 300.

Clouded leopard, *Neofelis nebulosa* Clouded leopards possess the most significant husbandry challenges of any felid due to the propensity of some males to attack and sometimes kill females. Other pairs never breed. As a result, most of the captive population of zoo and privately owned animals has a very low founder population (believed to be only 2-3 individuals). The same husbandry problem and low founder size exists in Europe. While striving to achieve a target population of 120 animals, the SSP is actively engaged in research to determine behavioral or husbandry cues that trigger aggression.

Lion, Panthera leo - One of the last SSPs to be developed for an otherwise large and very widely held felid, the initiation of the African lion studbook in 1992 found that only two lions could be traced back to wild founders in Africa. All other lions in zoos, regardless of the institution's size, were acquired as public donations or from other untraceable sources. Only one purebred Asian lion remains in North America. With a target population of 350 animals, only lions whose ancestors can all be traced back to the wild are accepted into the studbook and its SSP. Since the SSP began, several dozen lions have been imported, primarily from South Africa, but parties interested in importing additional lions need to be sure that specimens under consideration are not related to animals already in this country. In the case of Asian lions, the wild population will continue to be monitored, with future importations possible from sources within the Indian lion EEP population.

Leopard, Pantherapardus - An international studbook for four rare subspecies of leopards, Amur, Persian, Chinese and Sri Lankan, has been maintained for 25 years. At the request of the Arabs, the Arabian Leopard studbook has been developed and published this year. All these cats are in Middle Eastern locations. On the basis of conservation need, space availability and the potential for obtaining new founders, the Felid TAG feels there is only space for one race. As a result, the Amur leopard, *P. p. orientalis,* of the Russian Far East, adjacent Manchuria and North Korea has been identified as THE leopard for zoos and other North American participants to maintain. Hybrids, other

races, and color morphs will be managed to extinction. The Amur leopard is managed via a PMP and includes both AZA zoos, non-member zoos and private owners as part of its program. The target population is 120 species but it will probably be increased to 150 in order to meet genetic and demographic objectives. The EEP and the PMP will shortly join together to manage this species globally, and the Russian Ministry of the Environment has initiated discussion about a potential release program in the Russian Far East.

Jaguar, Panthera onca - Although perhaps the longest-lived large felid, the recently approved SSP found the North American population in AZA zoos and most other locations to be aging and virtually untraceable. As this time, only four jaguars can be traced back to nature, and only because all four were imported within the last three years. This population is being managed as an education population because of its relative abundance in many parts of its range. Additional founders are expected to be periodically available for inclusion into the SSP. The target population is 120 animals.

Puma, *Puma concolor* - A widely held species, the Felid TAG is urging its members to eliminate this species from their collections whenever possible in favor of similar-sized but rarer SSP or PMP felids. Only acquisition of pumas needed for education/ zoogeographic exhibit themes will be supported. The present zoo population is over 200 and the studbook keeper is striving to reduce this number to no more than 100 individuals.

Summary: As a result of analyzing the conservation, research and education/exhibit needs impacting these eight species of large cats, the overall target population is 1760 animals. Although large felids compete with each other for limited cage space in some situations, overall the TAG feels that the RCP goals can be met by encouraging its members to consult with species coordinators prior to acquiring new specimens or developing new exhibits. By interacting with non-AZA owners wherever possible and by not accepting donations of large felids (which only consume valuable spaces while providing nothing to their respective management programs) these goals can be met.

Small cats: The Felid TAG separated the 28 species of small felids presently recognized by taxonomists into three categories. As many as 8 species are included within the RCP for support because of their high conservation value, unique taxonomic status or high educational value. An additional eleven species are still present in North America but in very small and declining numbers. In many cases additional founders are not presently or likely to become available, and space for these species, even if founders were located in other regions, would probably not be available. As such, the TAG's RCP recommends that these eleven species be eliminated from collections through attrition or transfer and not be replaced. The last nine species are presently absent from North American AZA collections and the TAG will not support their acquisition unless sufficient founders are located for development of a genetically sound, long-term program, and unless adequate space can be identified.

Felid TAG - Support

The following 8 species presently supported by the RCP include:

Ocelot, *Leopardus pardalis* - Although once commonly imported for pets, legal

(Raising the Bar continued)

animals have not been available until the

(Raising the Bar continued)
last two years, and today most ocelots are of unknown or hybrid ancestry. The Felid TAG is recommending that the Brazilian ocelot, *L. p. mitis*, be the subspecies that zoos acquire because captive propagation is now occurring in some Brazilian zoos, and orphaned individuals have also been allowed to be exported. Recently three pairs were imported into North America by AZA zoos and the target population of this species is 130. Although only a PMP is presently in operation, the Felid TAG recommends that it be upgraded to SSP status as soon as possible.

Fishing cat, *Prionailurus viverrinus* Although not an endangered felid, its lowland habitat is under more stress than inland ones. Fishing cats also have unique aquatic tendencies which add to their exhibit and education value. An international studbook exists and the target population is 100. No management plan is in place but the TAG recommends that this species be managed by an SSP, an action which should be approved this fall.

Pallas's cat, *Otocolobus manul* - A monospecific genus, Pallas's cats or manuls are one of the few long-haired, cold-tolerant felids from Asia. Not available until recently, a number of founders have been imported from Russia in the last two to three years and litters have been reported in most collections. This species is a seasonal breeder and changes in its normal photoperiod requirements can disrupt its breeding season for an entire year. Pallas's cats, especially young ones, have also been found to be exquisitely susceptible to toxoplasmosis. A target population was initially set at 40 but was recently expanded to 75 in order to achieve genetic and demographic objects. An SSP is recommended.

Canada lynx, *Lynx canadensis* - Common in Canada and Alaska, this species is included in the RCP because of its educational and exhibit value for zoos with North American themes. The continental U.S. population has also been proposed for Threatened or Endangered status by the U.S. Fish and Wildlife Service. The present population is too large and the TAG recommends that their population be reduced to 50 animals. A regional studbook is recommended and a management plan developed at the PMP level.

Serval, Leptailurus serval - Common in nature and captivity, this species is important for institutions with zoogeographic themes as well as for education uses. Most specimens can probably be traced back to a subspecies. Currently there are more servals in zoos than recommended and the PMP has a target population of 75 animals.

Caracals, *Caracal caracal* - Caracals are managed with the assistance of an international studbook. Most of the recent importations are derived from Namibia and ultimately a pure subspecies can be maintained in North America. Although the TAG originally targeted the Asian race from Turkmenistan for the RCP, it became apparent that at best, only highly inbred hybrids were present in North America. More likely, no aspect of this race exists in this region, or is ever likely to become available. The population target for the PMP is 75 caracals.

Sand cat, *Felis Margarita* - Sand cats have a long but poorly managed history in North America. Two populations are present, one that is hybridized and another derived from the Israeli population. The TAG recommends an SSP with a target population of 75 cats.

Black-footed cat, *Felis nigripes* - One of the most popular small cats, black-footed cats have unique renal concerns that may be stress or diet-related and may

have shortened their live spans significantly. Recent research holds promise for this species and additional importations are possible. Possessing both a regional and international studbook, an SSP is recommended with a target population of 40.

Felid TAG - Eliminate

In North America, the following eleven species are present but in very low number or are otherwise not supported by the TAG:

Geoffroy's cat, *Oncifelis geoffroyi* - Once a common species in zoos and the private sector, this easily kept felid has disappeared from both types of owners because of poor management. Due to its Appendix I status under CITES, additional specimens from range countries are not easily obtained. A PMP is recommended but barring new founders, the existing population in zoos is not likely to be viable.

Bobcat, *Lynx rufus* - Large numbers of bobcats are present in zoos, so large that their presence is deleterious to other RCP species. While the TAG realizes that bobcats have an important role in situations where regional themes are present, AZA holders are asked to reduce the North American populations to free space for animals in more critical need.

Jaguarundi, Herpailurus jaguarondi - Jaguarundis have never been common in zoos and the founder size of most zoo-held populations is only two. Unless a significant number of founders are obtained from range countries, the captive population is probably not viable.

Margay, Leopardus wiedii - Although popular with zoos and private owners alike, margays are much more difficult to breed than other small spotted neotropical felids, and the present population in zoos is not believed to be viable. Given their conservation status and the lack of captive reproduction in range-country zoos, this species is slated for elimination by the Felid TAG.

Asian golden cat, *Catopuma temminckii* Asian golden cats have been exhibited sporadically by zoos but most founders never bred. Today virtually all living animals are closely related and there are a disproportionately large number of males. Given the legal protection of this species, coupled with the difficulty in getting additional captive-bred specimens from Southeast Asian zoos, its importation is not supported.

Rusty-spotted cat, *Prionailurus rubiginosus* - A small, secretive species seldom seen in captivity, all cats in North America derive solely from a single pair imported from Sri Lanka. Due to political strife, additional specimens from that country have not been available and the Colombo Zoo had to obtain specimens from Europe for exhibit. Populations in India are considered a distinct subspecies and are not available from any source. Although managed by an international studbook, this species is not endangered and should be managed to extinction.

Other lynx, *Lynx lynx* - A number of subspecies of Eurasian lynx are present in zoos. None are rare or endangered in the wild, but in some situations do compete (Raising the Bar continued) with spaces that should be allocated to Canadian lynx. The Felid TAG does not support maintenance of this species and its various forms.

Pampas cat, *Oncifelis colocolo* - Pampas cats have seldom been imported for any purpose, their appearance being less striking than that of the Geoffroy's cat. Not endangered in nature, they now number less than one half dozen in zoos and their owners are urged to not replace them upon death.

Wild cat ssp., *Felis sylvestris* - The

(Raising the Bar continued)
Eurasian and African wild cat, including forms from India and the Middle East as well as Europe, is generally common in nature. Gordon's wild cat, Indian desert cat and other forms from the Arabian Peninsula, are present in North America. Due to their relative abundance in nature, small founder size and lack of distinct markings, the TAG does not support maintenance of this species in any form.

Jungle cat, *Felis chaos* - Still common in nature, this species declined in captivity due to a general lack of interest in comparison to that of other species. Viable populations are not present in North America and owners are urged to eliminate them from future collection planning.

Leopard cat, *Prionailurus bengalensis* Leopard cats from various geographic origins were commonly imported into this country during the 1960's and early 70's. Most leopard cats in zoos derive their founders from public donations. With the cessation of their harvesting by the fur industry, leopard cats have become much more common in nature. This, plus the small, mixed population in zoos caused the Felid TAG to recommend they be eliminated from future collections.

Felid TAG - No Support

Several species of cats are naturally rare and although not legally endangered, have never been available for zoos or other owners. Other species are native to remote areas and highly regulated because of their endangered status. The following felids are not presently in North American AZA collections and the Felid TAG does not support their future acquisition.

Bornean bay cat, *Catopuma badia* - Until recently, this species was an enigma because knowledge about its origin and biology was only derived from several museum specimens. Although recently photographed in the wild, it would be highly unlikely that a viable captive population of this naturally rare felid could ever be obtained.

Chinese mountain (desert) cat, *Felis bieti* A small, long-haired felid native only to central China, this species is occasionally maintained in Chinese zoos. Given the remoteness of its habitat, coupled with the lack of information and availability, zoos are not encouraged to acquire this species.

Spanish lynx, *Lynxpardinus* - Considered one of the very rarest felids on earth, Spanish lynx suffer from having disjunct populations, continued habitat loss and accidental death from trappers and automobiles. Although the Spanish may initiate a captive-breeding program in the near future, it is not likely that this species will ever become available for export to North America.

Mountain cat, *Oncifelis jacobita* - One of the least known cats of South America, its remote habitat and legal status make it highly unlikely this species will ever be available to zoos or other owners.

Kodkod, *Oncifelis guigna* - Another little known cat from Chile (primarily), it has only been maintained by range-country zoos. The TAG does not support efforts to import additional specimens even if they become available.

African golden cat, *Profelis aurata* Although formerly present in North America, this mono-colored felid lacks conservation need in nature and competes poorly against similar-sized spotted cats of Africa. No effort to import new animals is supported.

Marbled cat, *Pardofelis marmorata* - A little-known felid from Southeast Asia, all recent captive-born specimens derived their origin from a single pair of founders at the Los Angeles Zoo. Apparently rare

in nature, this little "big cat" is highly protected and not likely to ever be available from captive-born sources in range countries.

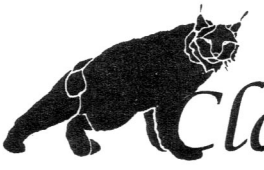
Flat-headed cat, *Prionailurus planiceps* Rarely seen in nature or in captivity, the biology of this species is poorly known at best. Although range-country zoos have aggressively sought to acquire this species, success has been low. Captive propagation has been non-existent and zoos are not encouraged to acquire specimens.

Tigrina, Leopardus tigrinus - Easily confused with other small neotropical spotted felids, most of the captive population is located in a single private collection. It is derived from several different subspecies. Significant numbers of additional founders from range countries would be needed if this species is to survive in captivity.

Summary: Overall, the RCP for small cats allows for a target population of 670 specimens covering all twelve recommended species. Admittedly this is a tall order and the demographic and genetic goals of some species presently breeding in zoos will probably grow, filling species of other species that although endorsed by the TAG in its RCP, are probably not viable. The Regional Collection Plan is, in effect, a working document.

Web site: During the spring 1999, the Felid TAG launched its web site. Located at http://www.csew.com/felidtag/, the objective of this web site is to provide accurate, up-to-date information on those species of felids targeted by the TAG in its Regional Collection Plan for captive management. The list of species described on individual, website "fact sheets" presently includes tiger, lion, snow leopard, cheetah, fishing cat, caracal and black-footed cat, but all other species included in the TAG's RCP will be covered in the future. In addition to fact sheets which include basic biology, conservation issues, range maps and photographs of the species, the web site offers a unique opportunity to post species specific articles that describe new research, studbook reports, bibliographies, etc.

The web site also includes the TAG's mission statement, a current listing of felid taxonomy according to Wilson and Reeder (1993) and all impacted species legal status, a directory of the TAG Work Group, AZA Minimum Husbandry Guidelines for Keeping Small and Large Cats, The Husbandry Manual for Small Cats, Contraception Guidelines, the Three-year Action Plan, felid projects endorsed by the Felid TAG, and selected links to other animal and conservation web sites.



Classified

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Ad rates for submitted photo ready ads:

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Pasteurellosis

by Colette Griffiths
Cocoa's Pride, Vancouver, Washington

Pasteurella is a small, nonmotile, Gramnegative, ovoid bacterial rod. The organism is a parasite of the oral cavity of many species of animals, including felines. Pasteurella was isolated from the oral cavity and upper respiratory tract of 60 – 75% of normal felines. The rate of isolation is higher from animals with dental tartar and gingival disease than from animals with clean teeth.

Pasteurella is most frequently isolated as a facultative anaerobe along with other bacteria from infected wounds and abscesses in felines. It has also been isolated from infections of the external ear canals, conjunctiva, nasal passages and sinuses, tooth root abscesses, periodontal infections, and surgical wounds. Pasteurella species are frequent secondary invaders in cats with primary viral pneumonia.

Pasteurella organisms enter tissues by licking of wounds or bites. Organisms are frequently isolated from the claws of cats, but cat scratches are less apt to be associated with infections than bites.

Pasteurella infections in cats tend to remain localized. Local tissue necrosis is usually minimal; when necrosis does occur; it is generally localized to the skin overlying the abscess.

Treatment is to clean a fresh wound. Closed infections should be opened to allow drainage and then cleansed periodically until drainage ceases and the wound begins to heal. Systemic antibiotics are an important part of treatment and should be given for 5-10 days. Feline isolates of Pasteurella multocida are most sensitive to tetracycline and chloramphenicol, only moderately sensitive to penicillin and less resistant to sulfas. Trimethoprim-sulfonamides are effective for treatment of Pasteurella respiratory infections.

Pasteurella infections in cats are interesting in two ways. First, cats seem resistant to the septicemic forms of pasteurellosis that are common in other species. Second, cats are notorious carriers of pathogenic strains of Pasteurella. Pasteurella species are transmitted from cat to cat almost exclusively by bites. Therefore, affected cats are not a hazard to other cats. I have talked to my vet about treatment, and she feels it is not a good use of my money.

Pasteurellosis is probably the most common zoonotic disease passed from animal to people. Pasteurellosis exists in people in two clinical forms: localized infection caused by an animal bite, and a systemic form manifested variably as sinusitis, pneumonia, bacteremia or brain abscess. The origin of Pasteurellosis moltocida in the systemic form is usually unknown, though many affected people have a history of animal exposure.

Localized pasteurellosis in people occurs at the site of the bite, usually in soft tissues of the hand. Joint infections can be a serious consequence of bites that penetrate into the synovial spaces. The wound becomes painful and inflamed within a few hours. The infection spreads rapidly to surrounding tissues and along lymphatics to the regional lymph nodes. The most common local complications are

abscess formation and tenosynocitis. The condition is most severe after the first bite; subsequent bites are less likely to become infected. Wounds should be cleansed as soon as possible. Soaking the wound and applying a drawing salve is recommended. If pain, redness and swelling begin to develop at the site after a few hours, medical attention should be sought as soon as possible. The effective treatment in humans is augmentin. Pasteurellosis is not to be taken lightly. A small puncture wound that you would just wash and go about your business is the one that needs your attention.

In closing, the diet of your animal has nothing to do with the bacteria. The wound is tiny but the pain is mighty.

Information has been gathered from:

Common Infectious Diseases of Multiple-Cat Environments
Zoo Medicine
Mammals in Captivity
Kaiser Emergency room doctors and nurses
Andresen Animal Clinic

Writing Your Will?

Remember the Ken Hatfield Memorial Scholarship Fund!

Do You Know These Cat Facts?

(Answers on Page 21)

1. I am a cat with 4 names. I am considered a small cat because I can't roar, but I can purr really loud. I live in the Americas and I am usually brownish yellow all over.
a. Puma
b. Lion
c. Bobcat

2. I am one of the only cats where the males and females look different. I have one of the loudest roars of all the cats, so some humans call me the king of beasts. Unlike most cats, I live in social groups called prides.
a. Jaguar
b. Lion
c. Leopard

3. I am in my own genus, *neofelis* because of my uniqueness. I am one of the most arboreal (tree climbing) of cats. My habitat ranges from Indonesia through Southeast Asia to India.
a. Tiger
b. Bobcat
c. Clouded leopard

4. I am the most popular pet in the United States of America. Like all other cats, I have paws with claws that retract. Just like the big cats, we small cats have five toes on each of our front paws and four in each of our back paws.
a. Rusty-spotted cat
b. Bobcat
c. House cat

5. I am the only big roaring cat in the Americas. I like swimming and climbing trees. I am mostly spotted and look a lot like a leopard. Sometimes I look black, but really my fur is black with black spots.
a. Cheetah
b. Jaguar
c. Clouded Leopard

6. Some people think I look more like a dog than a cat. My head is small when compared to the rest of my body. I am the fastest animal in the world but even so, I am in danger of extinction!
a. Leopard
b. Lion
c. Cheetah

Ocelots and Servals

Part II

Compiled by Marge Maxwell

POPULATION

Serval: The serval's distribution and range has remained largely intact, shrinking only in the extreme north and south due to habitat loss in the wake of increasing urbanization and changes in land use. Possibly servals were never very numerous in North Africa, and water sources in the region are likely to be focal points of human use and settlement. However, servals are highly tolerant of agricultural development, which fosters increased rodent densities, as long as there is sufficient water and shelter available. Degradation of forests to savannah in West Africa probably favors the species.

Minimum home ranges in Ngorongoro to be 11.6 km^2 (or 7.21 mi^2)for one adult male serval and 9.5 km^2 (or 5.9 mi^2) for one adult female serval over four years. The male's home range overlapped those of at least two adult females, while the ranges of three adult females showed minimal overlap. Larger home ranges for servals are on South African ranchland: 16-20 km^2 (or 9.94 to 12.42 mi^2) for two adult females and 31.5 km^2 (or 19.57 mi^2) for one male, monitored for 4-5 months during the spring and summer.

Ocelot: The ocelot was the spotted cat most heavily exploited by the fur trade from the early 1960s to the mid-1970s: It has been estimated that as many as 200,000 animals were taken every year. From 1976 to 1983, net international trade in skins fell to an average of 24,600 pelts annually, and effectively ceased in the late. In the early 1980s, commercial hunting had depleted formerly abundant ocelot populations in Venezuela, but more recently hunting pressure is greatly reduced, and there are signs of recolonization and recovery. Even at the lowest density estimates (one animal per 5 km^2 or 3.1 mi^2), there would be approximately 800,000 ocelots in forested South America alone, and suggests that true numbers are probably 1.5-3 million.

The ocelot is one of the few small small cats for which spacing and abundance have been studied in several different habitat types.

Lowland rainforest

1. Manu National Park (Peru): Home ranges of two adult females were 1.6 and 2.5 km^2 (or .99 and 1.55 mi^2); home ranges of two adult males were 5.9 and 8.1 km^2. Resident animals, particularly males, often patrolled the perimeter of their territories, travelling quickly (8.8-10.4 km/hr or 5.47-6.46 mi/hr) and seldom pausing. Density was high, estimated at four resident ocelots per 5 km^2 (or3.17 mi^2).
2. Iguaçu National Park (Brazil): From a radiotelemetry study in progress, average home range size for six adult ocelots as 11.3 km^2 (or 6.02 mi^2).
3. Cockscomb Basin Wildlife Sanctuary

(Belize): Home range of one adult female was quite large, 14.3 km² (or 8.89 mi²). A sub-adult male had a home range of 31.2 km² (or19.39 mi²). Most of their territories consisted of secondary forest.

Seasonally flooded savanna woodland

4. Venezuelan llanos: Home ranges of two adult males were 9.3 and 11.1 km² (or 5.78 and6.9 mi²). Mean home range for six adult females was 3.4 km² (or 2.11mi²). Density was estimated at two resident ocelots per 5 km² (or 3.11 mi²).

5. Brazilian Pantanal: Home ranges (six months only) of two adult females were 0.8 and 1.5 km² (or .5 and .93 mi²).

Semi-arid woodland and scrub

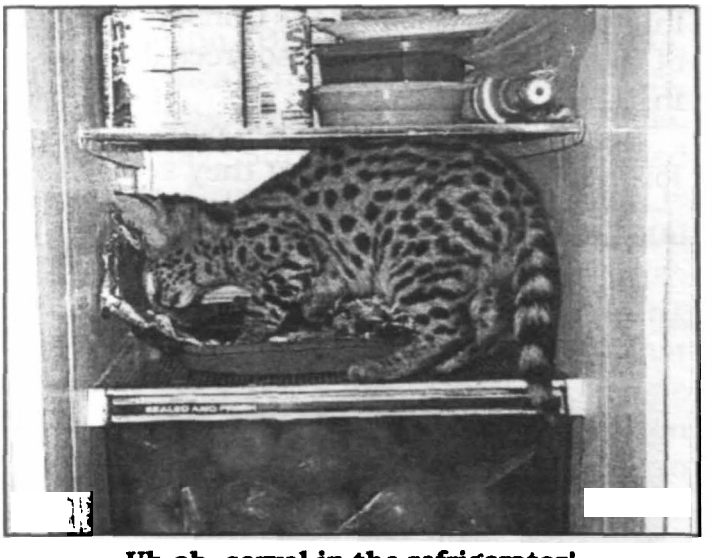
6. Southern Texas (U.S.): In dense brush and oak forest mosaic, an adult male maintained a home range of 3.5 km² or 2.17 mi²), and a female of 2.1 km² or 1.3 mi²). Working in chaparral habitat, a mean home range for five males of 12.3 km² (or 7.64 mi²) and for three females of 7.0 km² (or 4.35 mi²) was found.

SOCIAL SYSTEMS

Both ocelots and servals appear to have similar social systems - neighboring females occupy small, essentially non-overlapping ranges, and males hold larger ranges that overlap with the ranges of one or more females. Range sizes of female ocelots typically vary from 2 to 10 km² (or 1.24 to 6.21 mi²) while those of males are 5 to 18 km² (or 3.11 to 11.18 mi²). Both species maintain their ranges in similar ways: they urine spray, make scrapes by raking the ground with their hind feet, and leave their feces in prominent places. Males and females hunt alone but they are not asocial. While traveling about their ranges, neighbors encounter each other along boundaries and come to know each other by sight and smell. Associations lasting for a day or two are known for both ocelots and servals; some of these associations are for mating purposes, but others are for unknown reasons.

After a gestation period of 79 to 82 days, ocelots may give birth to as many as three kittens; however, the more usual number of young in a litter is one. Servals have a shorter gestation period, about 74 days, and litters can consist of as many as five kittens, but more usually two or three.

Female ocelots and servals show similar behavior patterns when they have young, and both species raise their young alone, without help from the male. Immediately after her kittens are born, a mother spends most of her time at the den, leaving only to drink or hunt nearby. Later, when the young become more mobile, she has to increase her hunting efforts to feed the extra mouths. This is clearly a difficult time for females of both species, and many young die at this stage. A study carried out in the Ngorongoro Crater showed that female servals with young had to spend twice as much time hunting as those without young. For servals, and probably other cats too, prey capture rates remain the same per distance traveled whether females have young or not, and this means that females with kittens have to travel farther to catch more food. By



Uh-oh, serval in the refrigerator!

(Ocelots and Servals continued)
doubling the normal daily distance traveled, female servals probably double their food intake.

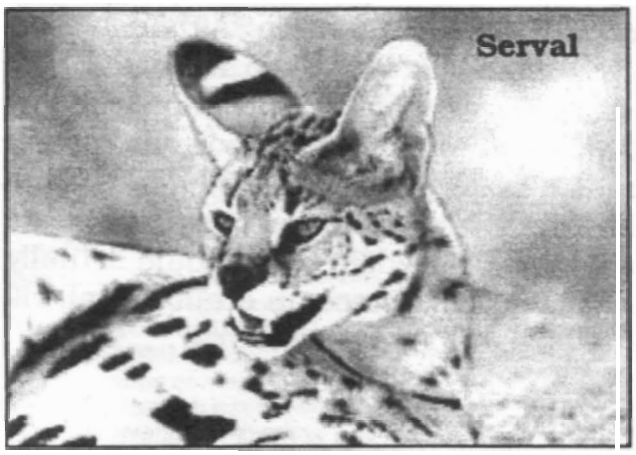
Ocelots may have a more difficult time finding and catching food than servals. One radio-collared female ocelot in Peru was monitored after she gave birth. When her kittens were one month old, the female doubled her normal activity and spent as much as 17 of every 24 hours hunting. Despite her efforts, the young died. Even when female ocelots are not nursing young, they spend almost half of every 24 hours hunting. The long gestation period of the ocelot and the subsequent small litter size and slow maturation of young, may be adaptations for living under conditions where food is hard to find and where a cat needs to spend much of its day hunting in order to meet its normal daily energy requirements.

Over their range, both ocelots and servals live at relatively high densities. In Peru and Venezuela, ocelot densities have been calculated to between 100 and 200 adults per 100 square miles.) Data on serval density are more scanty, but sightings in the Ngorongoro Crater suggest that these cats may live at densities of approximately 40 per 100 square kilometers (approximately 100 per 100 square miles.)

In their own way, both ocelots and servals are highly specialized rodent catchers, and as such, both cats benefit humans by killing rats and mice. On the other hand, both species are also known to make raids on domestic poultry, and many ocelots and servals are shot every year for these chicken-killing habits.
If success in the biological world is measured by an animal's ability to survive and breed, then the serval's ability to survive in more open habitats probably makes it a more successful cat than the ocelot. The serval has been able to exploit high rodent populations in open grasslands and woodlands by virtue of its morphological and behavioral specializations. These specializations are very similar to those found in the canid family, a group that also preys extensively on small rodents in open habitats. With its large ears, small slim face, and long legs, the serval resembles a fox or a maned wolf rather than a cat. The hunting behavior of the serval is also canid-like. The high bouncing pounce, the scanning of an area for sounds, and digging, are all hunting behaviors shared more with the dog family than with other members of the cat family.

Although radio-tracking studies of ocelots have shown that this cat sometimes hunts in more open areas at night, it remains a species that is strongly tied to dense cover. In all the areas inhabited by them - from the thick brushy chapparal vegetation of Texas to the tropical rainforests of Peru - ocelots do not seem to be able to survive where forest or thick brush has been eradicated. Unfortunately, both the deforestation of much of South and Central America, and the demand for the ocelot's beautiful spotted coat, have combined to endanger this cat. The ocelot was placed on the endangered species list of the International Union for the Conservation of Nature and Natural Resources (IUCN) in 1989.

Servals also are sometimes persecuted for their spotted skins, but they seem to



be able to survive alongside human activity better than many other spotted cats. Servals thrive on the rats and mice that go hand in hand with agricultural activity, and they are quite common in rural areas in many parts of Africa. As long as they are not hunted, these graceful long-legged cats can survive in man-altered habitats and co-exist with humans. This will be the ultimate measure of their success.

THREATS AND PROTECTION

Ocelots

The protection status for ocelots was upgraded to CITES Appendix I in 1989. There is national legislation in each country protecting most of its range. Hunting of ocelots is prohibited in Argentina, Brazil, Bolivia, Colombia, Costa Rica, French Guiana, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Suriname, Trinidad, United States, Uruguay, Venezuela. Hunting is regulated in Peru. There is no legal protection in Ecuador, El Salvador, Guyana. Adjusting for overlapping generations (females) and the fact that males typically mate with more than one female, it is estimated that a population of 1,334 adult ocelots is required to realize an effective population of 500 ocelots.

The ocelot is considered one of the most successful forms of mammalian life in the Amazon region. It is tolerant of disturbed habitat, and persists in wooded patches near human settlements. Ocelots have a small average litter size, and one of the longest gestations and slowest growth rates among small felids. One lactating female increased her daily activity by a maximum of 133% after birth of her litter, but still lost her young to starvation after six weeks - despite high diversity and abundance of small prey in the study area.

Ocelots may not be able to reproduce where prey density is reduced. The two authors differ, however, on the potential impact of direct human hunting pressure. Ocelot populations have proved resilient to harvest because of their social organization.

The serval's protection status is CITES Appendix II. Servals are not protected over most of its range. Hunting is prohibited in Algeria, Botswana, Congo, Kenya, Liberia, Mozambique, Nigeria, Rwanda, South Africa (Cape province only). Hunting is regulated in Angola, Burkina Faso, Central African Republic, Ghana, Malawi, Senegal, Sierra Leone, Somalia, Tanzania, Togo, Zaïre, Zambia. There is no legal protection in Benin, Cameroon, Ethiopia, Gabon, Gambia, Guinea Bissau, Ivory Coast, Lesotho, Malawi, Mauritania, Morocco, Namibia, Niger, South Africa, Sudan, Swaziland, Tunisia, Uganda, Zimbabwe.

Wetland conservation is the primary key to serval conservation. Wetlands harbour comparatively high rodent densities compared to other habitat types, and form the core areas of serval home. Degradation of grasslands through annual burning followed by over-grazing by domestic hoofstock, leads to a reduced abundance of small rodents.

Trade in serval pelts has been reported from many countries; they are frequently

(Ocelots and Servals continued)

marketed as "cheetah" or "leopard". While the scale of the harvest and its effect upon populations is difficult to judge, the pelt trade appears to be primarily domestic (especially for ceremonial or medicinal purposes) or tourist-oriented, rather than international commercial exports. The serval's localized distribution around water sources may increase its vulnerability to hunting; it will also climb a tree when chased by hounds.

Servals occasionally kill domestic poultry and only rarely young livestock (sheep and goats): studies of their diet in farming areas in Zimbabwe and South Africa found no evidence that predation was a problem. Problem servals which raid chicken coops can be easily live-trapped for translocation. Although 17% of Namibian farmers who indicated that servals were present on their land reported livestock predation, none took any control measures (legally permissible), indicating that the problem is not serious. The serval's preference for rodent prey should actually benefit farmers since an adult serval will eat some 4,000 rodents a year.

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President's Perspective

Everything Old Is New Again

Have you noticed that phenomenon? My Mother said if you held on to anything for seven years you would find a use for it. It seems to me that animal rules and regulations are recycled yearly in some form or other and I haven't found a use for all of them yet! I agree that some rules are necessary but some "do-gooders" always try to change things for everyone to satisfy the wants of a few. The following are excerpts from LIOC's Board of Directors Meeting Minutes. Anything sound familiar?

1972 Convention Dallas, Texas Guest Speaker, Bill Engler
Bill spoke on a subject dear to us all ... "The endangered state of our pets. He stressed the importance of breeding and that those now breeding are the stars of LIOC, as we can no longer import pets under the Endangered Species Act."

1973 Convention Los Angeles, Ca. Guest Speaker, Bill Boyle; "Each member should have the city or county set up standards for the care and protection of exotic pets if there is not such standard at present" He mentioned the possibility of getting a Game Farm License from the Game and Fish Commission in your state.

1974 Convention Portland, Oregon From the minutes. No speaker noted.

#1 Obtain Directors and Officers approval for the President to initiate legal action on the Endangered Species Act and any other Federal or State law that is considered detrimental or unconstitutional to the membership.

#2 a suggestion was made that we obtain the bulk of legal funds necessary to fight legislation by assessing each member $10.00.

1975 Convention Orlando, Florida Speaker Ken Hatfield; Our lawyer needed to go ahead with research on the Endangered Speakers Act.

1976 Convention Cherry Hill, New Jersey; David Baskin opened the discussion by pointing out the necessity that LIOC expand its visions and seek deliberate growth and support to help offset the powerful and wealthy Humane Society movements which threaten the very ideals of LIOC.

1987 Convention Atlanta, Georgia Pat Hoctor of Animal Finders Guide; "The private owner may very well be the only thing between the exotic feline and extinction. The very special responsibility we have to share our knowledge and the measures to insure existence of the felines in our care."

1992 Convention; Discussion on captive bred wildlife negating education as a valid reason to maintain exotics. Members were asked to write letters on this matter to US Fish and Wildlife Service, Office of Management Authority.

NOW IT IS SHAMBALA! As you can see, opposition to our choice of life-style has been with us from the beginning and will probably always be.

In closing I'd like to give you a quote from an unidentified member at the 1997 Convention. "Our family joined LIOC because we felt that a mind set change is needed for the general public and this organization has the opportunity to be a very influential part of that. If we can take these animals and enjoy them, but while we are enjoying them, educate with them and create awareness for them, then we are doing something that is truly unique. If we treat these animals as another pet in the house, we are suppressing the

possibilities of what could take place for these animals in the future."
See YOU at Convention.

Barbara Wilton,
President

Bounty on Mountain Lions

Bounty hunters plan to kill up to 34 mountain lions in southern New Mexico this year under a contract with the state's wildlife agency in efforts to protect dwindling bighorn sheep herds.

During the past four years, 50 radio-collared sheep in the state have died, of which 37 were positively identified as lion kills, say officials of the New Mexico Department of Game and Fish (NMDGF). Fewer than 300 desert bighorns remain in the state. In January, the NMDGF contracted to pay four hunters a $350 bounty for each lion they kill.

Animal rights groups, however, charge that the NMDGF's strategy ignores habitat issues. They say livestock overgrazing of federal land has reduced deer herds, the lion's preferred prey. "They're not approaching wildlife management from a scientific basis," Lisa Jennings, director of Animal Protection of New Mexico, says of the NMDGF. "It's all politically based decision making," says Ben Neary.

This article is adapted from an article in the May 2000 issue of Field & Stream Magazine.

Answers to Cat Facts on Page 13:
1. a. puma, 2. b. lion, 3. c. clouded leopard, 4. c. house cat, 5. b. jaguar, 6. c. cheetah

Pacific Northwest Exotics March 26 Meeting Minutes Portland Meadows

We discussed the recent USDA (Ron DeHaven) publication concerning ownership of exotic cats. We feel that he overstepped the bounds of his job by putting out a publication that discusses if people SHOULD own an exotic cat, when the role of the USDA is, as we read the authorizing legislation, is simply to inspect those people who DO own exotic animals

Reminded everyone with a "dangerous" animal to have a perimeter fence to make sure "strange hands" won't get close enough to receive a bite or scratch... you need to check with your inspector to find out what the legal requirements are for the animal you keep.

The "Shambala Bill" may be introduced in Congress, so everyone needs to write to their Representative and Senator asking they vote NO on this restrictive bill... we feel it is FAR better for the USDA and other government bodies to simply enforce the laws already written, not take this step toward banning ownership of exotic animals.

If you wish to join other animal owners, contact the Ohio Association of Animal Owners, at OAAO, PO Box 175, Pleasant Hill, OH 45359, to ask how you may help.

Submitted by Steve Belknap
PNWE, President

Alliance for the Conservation of Exotic Felines
Cascade branch of the LIOC

Meeting April 22, 2000

This meeting was held at my house on Whidbey Island. We once again had a fairly good turnout with several new members showing, as well as some members who haven't been to a meeting in quite a while. The wonderful Mariah the Lynx was there providing much entertainment. (Watching her play in the bathtub with great joy was quite fun!) Once we finally got the official meeting underway (even later that usual!), things moved along fairly quickly. We noted that I have not finished the membership cards yet (bad john, bad.) and that I should get to work on them. Jeanne had contacted LIOC about reprinting the "Exotica" document. Since much of the information in it is either out of date, or has been incorporated into other documents, we won't be reprinting it. We didn't get any status on the Calendar project this time. It looks like we can get Jackets/Hats/whatever made up with the club logo, but we haven't finalized on the details yet. We've been leaning towards getting jackets, as most of us already have enough shirts! I was able to tell everybody about getting a USDA Class C Exhibitors permit as I just received mine. Mr. Kaelin (a new member) was able to tell us about the new regulations on exotic animals in Puyallup - which comes down to basically a ban with existing animals grandfathered in. Our newsletter editor REALLY needs articles, pictures, jokes, cartoons, ANYTHING to help fill the newsletter. If you have a cute story, fun picture, health information, caging information, whatever, SEND IT IN! We also want to find more members - especially those people who already have an exotic cat and don't realize that groups like ours exist. If you have any ideas on how to get in contact with these people, please tell us! Are there any fairs or events in your area that we might want to have a small booth at? Other ideas? We are open for suggestions.

Meeting May 20, 2000

This meeting was held at the home of Dave Coleburn on Anacortes Island. Dave is one of the clubs USDA licensed exhibitors, and has an interesting collection of animals. (See http://www.PredatorsOfTheHeart.Com) He has a very nice setup with double entry gates, security areas and various things to keep the animals entertained and happy. We had about 10 members show up, which isn't bad for a meeting at the very far north end of our range. (and taking into consideration that a few mistakes were made with the directions on how to get there... :-(This meeting started a bit later than usual, since everybody wanted to take a tour of Dave's facilities first. Once we got down to business, things went fairly quickly. It was pointed out that I need to get the membership cards made up ASAP. We are looking for somebody to become certified to teach the LIOC Exotic Animal Husbandry course. This would allow us to start teaching the course out this way. Suggestions and Volunteers are welcome. The latest update on the possibility of ACEF Jackets is that Laura Kalein sent in a number of choices and price options from one supplier and Dave Coleburn and I will be researching two other suppliers this month. Hopefully we will have a final decision on this soon. We REALLY need photos for the newsletter! If you have any photos of your animals that you wouldn't mind being published, send them in! We can scan them and return them to you. Please include a short description (at least the name of the animal.) and a signed note giving us permission to use the photo. If we want to get a photo calendar made, we need to get photos! We have a professional photographer in the group who can come out to your place to take pictures of your animals. Please contact us if you would like to arrange this. At this meeting we also received a short description of and a handout on the "Shambala" bill - which is a federal level proposal that basically outlaws private exotic ownership. The Phoenix organization (http://www.PhoenixExotics.org) has supplied a set of handouts and postcards on their web site to help fight this thing. Those attending this meeting also received flyers and cards for Dave's "Predator of the Heart" show, which looks very interesting! Our next meeting will be down south near Toledo, WA at Kim and Dave Germains place. (Easy to get to, and the directions will be accurate!) The July meeting is a Picnic/Barn Raising party at Linda Holzingers place! We really need to have a good idea of how many people will be coming, and if they can do any heavy lifting/construction work! We will need tools, food, and lots of help! This should be a lot of fun, so I hope to see all of you there!

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U.S. Fish & Wildlife Service: Canada Lynx Listed as Threatened

FORT SNELLING, Minn., March 21 — The U.S. Fish and Wildlife Service today listed Canada lynx in the contiguous United States as threatened under the Endangered Species Act while including a special regulation that allows for the take and export of lawfully obtained captive-bred lynx. A species is listed as threatened when it is likely to become endangered throughout all or a significant portion of its range in the foreseeable future.

The lynx occurs predominantly on Federal lands, especially in the West. The Service concluded that the threat to the lynx in the contiguous United States is the lack of guidance to conserve the species in current Federal land management plans. The agency is working with other Federal agencies to conserve lynx habitat.

The Forest Service has signed a Lynx Conservation Agreement that would affect all forest plans within lynx habitat. Additionally, the Bureau of Land Management and the National Park Service are also developing lynx conservation agreements.

The Forest Service is also undertaking several analysis processes to amend their forest plans to incorporate direction designed to conserve the lynx. These actions will provide immediate benefits for lynx.

"These proactive Forest Service conservation actions, though independent of our decision to list the lynx, will play a crucial role in our efforts to recover the lynx," said Ralph Morgenweck, regional director of the Fish and Wildlife Service's Mountain-Prairie Region. "The goal of the Endangered Species Act is to recover species to levels where protection under the Act is no longer necessary. These forest management plans will serve as blueprints for recovery."

The Service determined in 1997 that the lynx warranted listing under the Act but did not propose listing at that time because of other higher priority listing needs. The decision was challenged by several environmental organizations, and a subsequent settlement agreement led to the Service proposing the lynx as threatened in 1998.

During the normal 12-month listing process and a rarely used six-month extension, the agency received and evaluated new information from States, Tribes, other Federal agencies, Canada, and the public. The Service also announced the availability of and received public comment on a newly completed Lynx Science Report prepared by a team of scientists led by the U.S. Forest Service. Today's listing decision is the result of that review.

The Canada lynx (Lynx canadensis), the only lynx in North America, is a rare forest-dwelling cat of northern latitudes.

It feeds primarily on snowshoe hares but also will prey on small mammals and birds. Its range extends from Alaska, throughout much of Canada, to the boreal forests in the northeastern United States, the Great Lakes, the Rocky Mountains and the Cascade Mountains.

The lynx is a medium-sized cat, similar to the bobcat, but appears somewhat larger. It has longer hind legs and very large well-furred paws, which make it highly adapted to hunting snowshoe hares in the deep snow typical throughout its range. It also has unique long tufts on the ears and a short, black-tipped tail.

Within the contiguous United States, the lynx's range extends into different regions that are separated from each other by ecological barriers consisting of unsuitable lynx habitat. These regions are the Northeast (Maine, New Hampshire, Vermont, New York); the Great Lakes (Minnesota, Wisconsin, Michigan); the Northern Rocky Mountains/Cascades (Washington, Oregon, Idaho, Montana, northwestern Wyoming, Utah); and the Southern Rocky Mountains (Colorado, southeastern Wyoming). Canada lynx in Alaska are not affected by today's listing decision.

The relative importance of each region to the survival and recovery of the species varies. The Northern Rockies/Cascades region supports the largest amount of lynx habitat and has the strongest evidence of long-term occurrence of resident lynx populations, both historically and currently. In the Northeast and Southern Rockies regions, the amount of lynx habitat is relatively limited and does not contribute substantially to the persistence of the contiguous U.S. lynx population.

Much of the habitat in the Great Lakes region is marginal and may not support prey densities sufficient to sustain lynx populations. As such, the Great lakes region does not contribute substantially to the persistence of the contiguous U.S. lynx population. The Service concluded that the Northern Rockies/Cascades region is the primary region necessary to support the continued long-term existence of lynx in the contiguous United States. However, biologists will continue to examine the role that each region plays in the long-term conservation of lynx during recovery planning for the species.

The Service concluded that lynx should be listed as one unit in the contiguous United States because, individually, none of the four geographical regions fulfill the Act's criteria required for a Distinct Population Segment that could be listed independently of the others.

Today, the Service filed with the Federal Register its decision to list the Canada lynx as threatened. The final rule will be published on March 24, 2000, and will take effect 30 days after publication.

The Service included a special 4(d) rule that will allow for take of lawfully obtained captive-bred lynx and for interstate transport and commerce in skins that are properly tagged with a valid export tag under the Convention for International Trade in Threatened and Endangered Species (CITES), which the Service administers in the United States.

A separate rule is being developed to address the take of lynx that may result incidentally from State and Tribal regulated hunting and trapping programs. This rule is in the review process and is expected to be published soon followed by a public comment period.

For more information concerning the final listing decision, visit the Service's lynx web site at: http://www.r6.fws.gov/endspp/lynx .