

NEWSLETTER

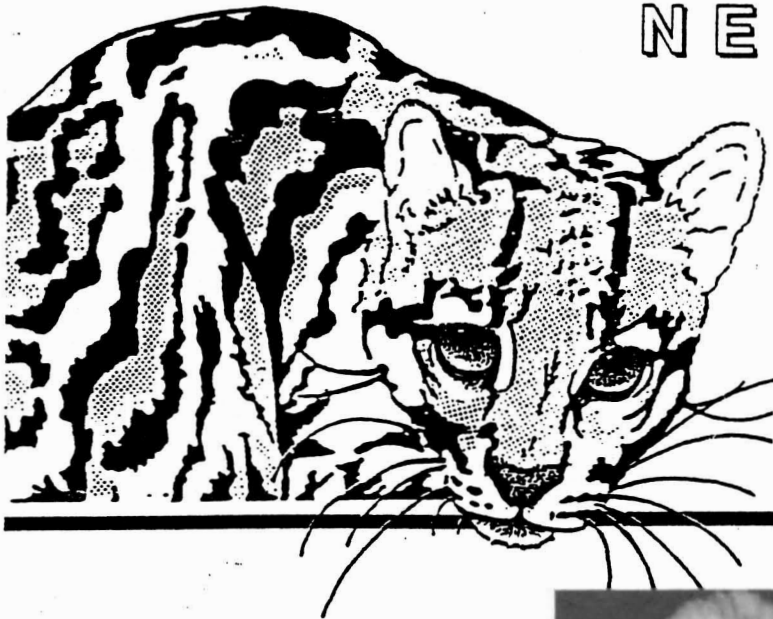


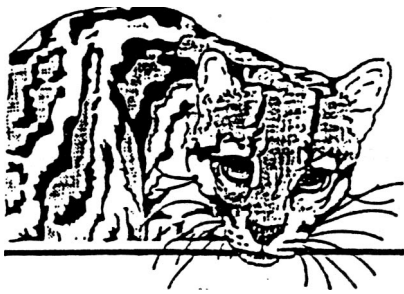
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Seasons Greetings to all LIOC members and their felines. Sending Peace and Love your way is young Lulee, a beautiful, rare white tiger, who lives with Betty Young, at Riverglen Exotics. This photo was taken last winter, and today, Lulee is a much larger, very majestic, and healthy feline. Riverglen is a "Total Immersion" Natural Behavior Research Center, dedicated to better understanding of the individual and social behavior of tigers.

*May the peace of the holidays
and the spirit of the season
be shared with all living things
now and throughout the year.*





L.I.O.C

Endangered Species Conservation Federation Inc.

This newsletter is published bi-monthly by the LIOC Endangered Species Conservation Federation, Inc. We are a non-profit (Federal I.D.#59-2048618), non-commercial organization, international in 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, in many cases, reflects the point of view of the person whose name appears on the article rather than the point of view of the organization. The organization's statement of intent is contained in our by-laws, a copy of which can be requested from the Secretary/Treasurer. Reproduction of the material in this newsletter may not be made without written permission of the authors and/or copyright owner LIOC. Persons interested in joining LIOC should contact the Term Director in charge of Member Services.

Since the newsletter consists primarily of articles, 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 Reader's Write column. Please send all newsletter material to the Managing Editor.

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Feline Immunodeficiency Virus (FIV)

A newly discovered, contagious and deadly disease is threatening the feline world. In 1986 Feline Immunodeficiency Virus (FIV) was isolated by Niels Pedersen, D.V.M. of the University of California. He reported that the virus shares many similarities with the human immunodeficiency virus that causes AIDS.

- Since its discovery, FIV has been identified worldwide, and in fact, test results on feline serum samples collected in the 1960's show that the disease has existed for decades.

Researchers have identified three possible stages of the disease. The first stage, which lasts from a few days to several weeks, occurs two to six weeks after a cat is exposed to the virus. Signs of this stage include fever, and a decrease in the number of white blood cells. An infected cat will experience a general swelling of the lymph nodes which can last up to nine months.

The second stage of the disease is as period of apparent normalcy. Cats can remain in good health for months to even years. FIV progresses more slowly than FeLV or FIP.

The third stage is the terminal, AIDS-like stage. This stage can last from six months to three years or longer. At this stage, cats develop opportunistic infections or disorders. Problems most frequently seen in infected cats include diseases of the oral cavity, respiratory diseases, anemia, diarrhea, weight loss, swollen lymph nodes, eye infections and skin disorders. Other signs include recurrent fevers, chronic abscesses, appetite loss, and in rare cases, neurological disorders.

Presence of FIV can be identified by having a blood sample screened for the FIV antibodies. If a feline is found to have this virus, veterinarians recommend treatment for the secondary diseases and infections, as well as high-quality diets, vitamin supplements, and stress removal, such as a flea-free environment and temperature moderations.

Experimental studies have shown that biting is the only effective way to transmit FIV. Feline caretakers of exotics should adhere to a program of quarantine for all new acquisitions, as well as testing for FIV, and make stringent efforts to prevent access to stray domestics or untested resident domestics.

At this time, there is no vaccination for this deadly disease, nor is there a cure.

portions of this article condensed from Cat Fancy,
November 1991 issue

"FIV was detected in 3 of 19 (15.85%) panthers examined by the Florida Panther Recovery team, during their 1991 capture season. . . . A collaborative research effort was initiated with Dr. Robert Olmstead of the National Institutes of Health. This has resulted in the isolation of 4 different viral strains of FIV from the panther. His preliminary results indicate that the strains of panther virus are similar to each other, but are distinctly different from the previously described domestic cat FIV isolates and that the virus has probably been associated with panther for thousands of years. (Olmstead, NIH, pers. comm.)"

Florida Panther Biomedical Studies, Melody E. Roelke, D.V.M.,

Primucell FIP Vaccine Available

Feline infectious peritonitis (FIP) is a progressively fatal, immune-mediated (i.e., driven by the immune system) disease of cats caused by the RNA virus belonging to the family of coronaviridae.

Infected cats shed the virus through their feces and secretions, and in natural situations, FIP virus is probably not infectious for longer than 2 to 3 weeks after a cage or feeding dish has been contaminated. Relatively large quantities of virus are required to infect a susceptible cat. Therefore, close continuous contact with infected cats is usually required for viral transmission. Consequently, FIP is more common in catteries or multiple-cat households. This disease occurs most frequently in kittens and cats between 6 months and 5 years of age.

The probable pathogenesis of FIP begins with primary infection of respiratory and intestinal tissue. FIP virus goes on to replicate in the gut lining where the virus is released into the intestinal lumen. There it is either excreted in feces or perhaps phagocytized by local macrophages. A cell-associated viremia, mainly in blood monocytes, ensues and establishes foci of infection in target organs such as the liver, spleen, and visceral lymph nodes, which contain extensive blood sinusoids lined by macrophages.

The period between initial exposure to the FIP virus and development of symptoms may be weeks, months, or even years.

Following an often mild fever and a slight nasal and ocular discharge, clinical FIP develops into one of three syndromes (1) effusive, or wet FIP, characterized by fibrinous serositis and abdominal and/or thoracic effusions; (2) noneffusive, or dry FIP, characterized by lesions in the central nervous system, eyes, or organs such as the mesenteric lymph nodes, kidneys, uveal tract, meninges, brain, and spinal cord, and (3) a combination of the two.

The prognosis for cats with clinical FIP is poor. At the present time, no known therapy exists that can terminate FIP virus infection.

Primucell FIP, offers a new approach to immunization. This modified live-virus FIP vaccine is administered intranasally (by dropper into each of the cat's nasal passages) to stimulate a local immune response. Because *Primucell FIP* contains a temperature-sensitive FIPV (TS-FIPV) strain that replicates primarily in upper respiratory tissues, relatively low levels of humoral antibodies are stimulated. As a result, the vaccine does not produce high levels of humoral antibodies that can precipitate FIP. Unlike experimental vaccines that enhanced disease after challenge, cats vaccinated IN with *Primucell FIP* did not become hypersensitized to FIP.

Suggested vaccination schedule for domestic cats is at 16 weeks, since younger cats have a lesser chance of contracting this disease, followed by annual boosters.

At this time, *Primucell FIP* is not recommended for use in pregnant queens.

Very little data is available on *Primucell FIP*'s use in exotics. Katie Knight-Monteiro reports she will be testing this vaccine on a yearling male cougar. The consulting veterinarian of ExotiCare, Dr. Steve Garner, D.V.M., will be taking titers on this feline to better document its efficacy. Katie will report back to LIOC in the future. Has any other LIOC member used this new vaccine? Please share your experience by contacting the newsletter editor.

Nutritional Analysis of Chicken & Turkey Necks

by Lynn Culver

John Perry, president of LIOC, contracted the Land O' Lakes food analysis labs to test chicken necks with and without skin and skinned turkey necks for several nutritional components. Protein, fat, ash, calcium and phosphorus percentages were determined.

Ten pounds of chicken necks were purchased fresh from a local retail grocery store. Five pounds were skinned, and five pounds were left unskinned. These two different lots were ground with a commercial grinder into two homogenous samples. 100 grams of each mixture was removed for testing.

The turkey necks were purchased in a frozen, thirty pound bulk package. The entire forty pounds, which included necks varying in diameter from 1 1/2 inches up to 2 1/2 inches, were ground in the same commercial grinder in a semi-frozen state. 100 grams of the homogenous substance was removed for analysis.

For comparison purposes, I have included the nutritional analysis of whole chickens with skin, provided to me by Ellen Dierenfeld, nutritionist for the New York Zoological Society,

RESULTS OF THE LAND O' LAKES ANALYSIS OF 100 GRAM WET WEIGHT SAMPLES

COMPONENT 100G SAMPLE	WHOLE CHIX	CHIX NECKS WITH SKIN	CHIX NECKS W/O SKIN	TURKEY NECKS W/O SKIN
Protein	19%	13.36%	16.51%	17.55%
Fat	9.01%	23.43%	8.09%	5.11%
Ash	3.18%	2.86%	4.77%	4.39%
Calcium	.65%	.841%	1.542%	1.750%
Phosphorus	.47%	.870%	1.415%	.730%
Ca:P Ratio	1.4:1	1:1.03	1:0.9	2.39:1
Calories	110 Cal	267 Cal	140 Cal	
Moisture	66.5%	58.56%	71.27%	72.80%

One must take into consideration that although these analyses were performed by a well-equipped laboratory, only one sample of each

DIET ANALYSIS continued

item was tested. There will be some variation between batches of chicken or turkey necks, but lacking even a second test, we cannot say to what extent we can expect a plus or minus variation from these results.

I will point out several observations. The LIOC data shows a radically different chicken neck than the one found in Fowler's Zoo and Wild Animal Medicine charts.* Instead of having only 7% protein, they are now 13% and 16%. Also different is the total calcium to phosphorus ratio, which is very close to 1:1 instead of the 2:1 quoted in Fowler from the 1964 U.S. Government Composition of Foods. Another major difference is the fat levels. Instead of 4.5%, it is now 8% without skin, up to 23% with skin. Skin is obviously a fatty substance, and one has to wonder about the 1964 study. The 4% fat, suggests they used skinned necks, but the 7% protein, as stated in Fowler's chart, is low.

Domestic feline nutritional needs are expressed in dry weight amounts. This method allows various food items to be compared and contrasted with each other without the nutritional density variations caused by the differing moisture amounts. I will once again provide the analysis results of chicken necks and turkey necks, only this time it will be with all moisture removed. As a comparison, I have included the breakdowns on whole chicken carcasses, and the recommended nutrient allowances for domestic cats, quoted by Ellen Dierenfeld in her article "Nutritional Considerations In Captive Tiger Management".

DRY WEIGHT BASIS ANALYSIS

COMPONENT	WHOLE CHIX WITH SKIN	CHIX NECK WITH SKIN	CHIX NECK W/O SKIN	TURKEY W/O SKIN	DOMESTIC FELINE MINIMUM REQUIRED
Protein	63.6%	32.5%	58%	64.5%	28%
Fat	27%	56%	28%	16%	10%
Ash	9.4%	6.9%	16.6%	18.7%	
Calcium	1.94%	2%	5.3%	6.4%	1%
Phosphorus	1.4%	2.1%	4.9%	2.7%	0.8%
Ca:P Ratio	1.4:1	1:1.03	1:0.9	2.36:1	1 to 2:1
Magnesium				.14%	.1%maximum

I will summarize some of the points made by Ellen Dierenfeld in the above mentioned tiger nutrition article.

* Zoo & Wild Animal Medicine, Murray Fowler, second edition, pg 87

DIET ANALYSIS Continued

"Based on zoo feeding trials, digestible energy (DE) requirements of 64 and 67 kcal/kg per body mass per day for male and female leopards, respectively, were calculated. Energy needs of young growing felids have been estimated at approximately 200 kcal/kg body mass.

No dietary requirements for carbohydrates has been demonstrated for the cat. Natural meat diets contain little carbohydrate.

Cats obtain about 60% of their calories from dietary fats, with diets composed of 67% fat effectively digested and utilized. Diets should contain at least 10% fat on a dry matter basis.

Total protein requirements range between 21% and 30% of the diet (on a dry matter basis) for adult and young animals, respectively. Rapidly growing cubs require higher protein levels in the diet, and can utilize up to 35% protein on a dry matter basis. Protein quality is important in meeting requirements. Connective tissues or organ meats alone do not contain an adequate amino acid spectrum for proper feline nutrition, whereas muscle meats are properly balanced. (editor's note: not all the protein in chicken necks is usable - the ligaments and skin contain undigestible protein)

Adequate Ca is especially important for young growing animals and lactating females, as both physiological states draw heavily on the Ca supplies. In addition to a proper Ca:P ratio of 1:1, these animals should be receiving at least 160-200 mg/kg body mass Ca daily. Excess dietary Ca will be excreted via the feces and/or urine, and does not appear to cause kidney damage or urinary calculi formation."

For more understanding of the mineral needs of felines, I reviewed "Mineral Nutrition of the Cat", by H.F. Hintz, Ph.D., and H.F. Schryver, D.V.M., Ph.D. Under calcium metabolism, interestingly, they report the opposite of Ellen Dierenfeld, . . . "the cat excretes little or no calcium via the kidney - even cats fed levels of calcium several times the maintenance requirement excreted less than 1% of the calcium intake in the urine." (editor's note: perhaps the answer to this disagreement lies in the feces, and its role in removing excess calcium)

The Cornell Book of Cats states that "an excessive amount of calcium causes slow growth and decreased thyroid function. Excessive calcium in the diet can bind zinc (which is a trace mineral that is important in the metabolism of nucleic acids, carbohydrates, proteins and fats) in an insoluble complex, preventing its absorption and thus making it inaccessible for the body to use. Excessive amounts of phosphorus promote kidney damage."

Wild felines in captivity, and especially young growing felines, suffer more frequently from a diet that contains inadequate amounts of calcium, or those that are unbalanced in their calcium/phosphorus ratio. This is usually the result of feeding an all meat or organ diet devoid of calcium supplementation. But as these previous authors

DIET ANALYSIS Continued

point out, we should be aware that too much calcium can be a danger to the feline also.

How much calcium should our felines be receiving in their diets? Several nutritional charts for domestic cats suggest a minimum of .8 to 1% calcium and .6 to .8% phosphorus on a dry weight basis. For comparison, I offer information on the commercial product Nebraska brand Feline Diet, which is fed to exotic felines by the nation's major zoos. It provides a diet with 1.5% calcium and 1.3% phosphorus on a dry weight basis. Hill's canned Zoopreem has 1.4% calcium and 1.0% phosphorus, on a dry weight basis. Private breeders of the small wild felines have expressed concerns over whether there is an adequate amount of calcium in Hill's product, especially for young growing kittens.

Magnesium analysis was performed on the turkey necks, as this mineral is receiving much interest as a possible source of FUS. The Cornell Book of Cats points out that "A dietary level of 400 milligrams per kilogram per day (0.04%) is the minimum requirement suggested by the NRC. A greater amount is suggested during lactation. Diets with excessive quantities of magnesium (above 0.1% by weight, i.e. more than 20 milligrams of magnesium/100 kilocalories of metabolizable energy) have been implicated in the formation of urinary struvite crystals and calculi, one of the main causes of the lower urinary tract disease of cats commonly referred to as feline urologic syndrome. (FUS)"

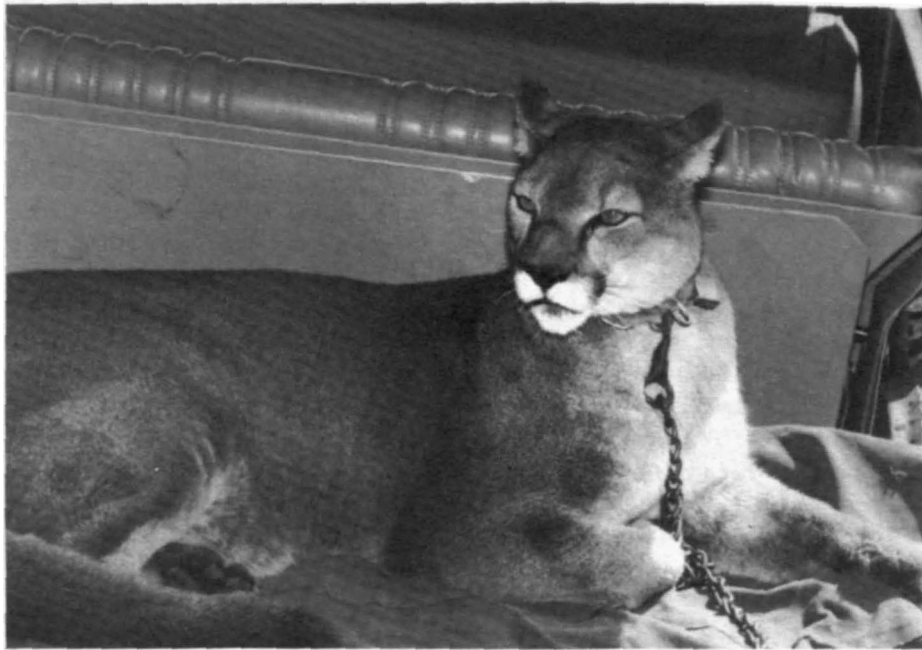
How to feed these calcium rich poultry parts, and in what combinations, to create a nutritionally balanced diet depends to a large extent on the feline's age, reproductive state, species, and also on the climate the feline is raised in. Cold weather requires a higher energy diet. Young growing felines need more calories and calcium per pound of body mass, and a greater percentage of protein in their daily diet, than they will as adults. Pregnant and lactating females require more calcium and calories than nonpregnant felines. Experiences have shown, wild felines and especially the smaller species of felids require a greater percentage of calcium in their diet than domestic cats.

Zoos do not have diet variation trials data - they all feed the same thing, commercial horsemeat hamburger. Here is a great potential for the private sector to add to the body of knowledge concerning husbandry of wild felines. We all feed different foods - the question is - how are our felines responding to our homemade diets? Are there any cases of FUS out there? Have your felines lived a long and healthy, reproductive life? What was their diet? Shouldn't we, as individuals, feed the best diet we possibly can? Readers, what has worked for you? What has NOT worked for you? Our feline behavior observation, and diet experimentation gives us great potential to add to the body of feline research, and in many ways add credibility and justification to the concept of private ownership. Lets all participate, share your experiences.

Goodbye Friend

It is impossible to remove the cold, still body of a friend from his home and just forget him. Hundreds of hours of memories flash through your mind. The pictures on the wall are constant reminders of his presence. Remember when . . . ? So many memories. Sean Puma died quietly on October 2nd. He was 18 years old. He touched our lives with the same dependence and love as one of our children. No one can spend 18 years with a warm loving friend and have it suddenly end without grieving, and grieving we are. We have grieved for the others, too, Cilli Ocelot and Whiskers, Budget and Zonya Pumas, but Sean was special. Of all the Exotics we have "taken in" over the past twenty years, we're sure the young man who left Sean on our doorstep had no idea he was a "diamond in the rough". Love and patience polished him to perfection. Sean accompanied us to hundreds of speak-outs and meetings. Many Northwest artists have used Sean as their model. Two paintings of Sean have won national awards. He was loved by everyone and especially by us.

Goodbye, Friend Barbara & Herb Wilton



BIRTHS

Jean Hatfield reports the birth of a pair of female geoffroy cat kittens.

If you have mailed back your membership questionnaire, which was included in the last issue of the newsletter, Congratulations! If not, get busy, fill it out, and mail it back today. You must fill out the questionnaire to be included in the Membership Directory, and the more involvement by the members, the better this resource tool will be and the greater potential communication between us all.



President's Perspective

Hat's off to George Stowers! I wrote in my last perspective about the need for a new approach to getting the word out to interest non-member exotic cat owners. He's come up with a new forum for for us to use. This is Compuserve, a computer service which has nationwide subscribers. It allows special interest groups space on their network. George is researching the potential to provide info about LIOC onto the Pet interest area. If anyone else uses computer services or bulletin boards, we'd be interested in getting you information for them.

I just received from Germany a very timely reprint of an article from *Der Praktische Tierarzt* (The Practicing Veterinarian) on the difficulties of removing intestinal obstructions. We need to be extra careful at holiday time not to give our animals toys that might not be digestible. The cute toys at pet shops are not meant to take the same sort of abuse that an exotic can give them. Even natural hide toys are frequently filled with polyester. We all know that hair isn't very digestible (from cleaning up hairballs), so don't take a chance with anything that isn't natural fiber or hide.

LIOC's Vice President, Suzi Mustacio has submitted her resignation from the board. She cited a desire to direct her energies towards other conservation interests. This position will be filled by executive appointment. If you are interested in serving, or have a suggestion of someone to serve, please contact any of the board members. The Vice President assists the president as the need arises with organizing and completing projects approved by the Board, as well as acting as Branch Coordinator.

This issue of the newsletter contains a list of Regional Contacts, persons willing to help members with questions or problems. They will be assisted by the board where necessary. We are still looking for a South Central, a Midwest and a Northeast Regional contact. Anyone who is interested and willing to serve, contact the LIOC secretary. This new concept will take a period of time to reach its full potential, but the goal is to improve communication between members, especially on local or regional issues.

Best wishes to all of you and your animals for the season and the new year.

Yours,

John Perry

*

Cougars Multiply; Food Up, Hunting Down

More mountain lions are prowling Colorado's cities and high country this year because of an unusual abundance of food and reduced hunting pressure, state wildlife officials say.

The state's cougar population is at its highest level in years, with an estimated 2,000 to 3,000 animals, wildlife biologists say. Only 700 of the big cats lived in the state as recently as 25 years ago. In those days, the government actually paid hunters to kill mountain lions year-round. In 1965, the state ended unlimited hunting of the predators - and the mountain lion population started rising. So did the numbers of mule deer, the mountain lion's main food source. Colorado now is home to about 600,000 mule deer, the most since the mid-1960's. The bulging deer population is the result mainly of seven successive mild winters.

The wealth of food means a higher percentage of newborn mountain lions survive. In addition, the extra food has caused some cougars to breed every year instead of every two years, officials said. Cougar kittens usually live with their mother for two years, and learn to hunt. But quicker breeding schedules mean immature cougars are now being abandoned by their mothers before they've learned to survive in the wild.

"The problems we've been having lately are with young lions," said Harlan Riffle, a wildlife program specialist for the Colorado Division of Wildlife. "These young lions don't really know how to kill deer, so they go after something easy - like dogs or cats."

That's what happened last weekend in Golden, where a young cougar prowled around a homeowner's backyard after killing the family's pet cat. And young cougars were killed by police earlier this month in a southeast Denver backyard and in August in a neighborhood in southeastern Colorado Springs.

"When these juvenile lions are kicked out by their mother, they aren't too sure where to go," said Kelly Drake of the Colorado Wildlife Federation. "It's like people going to New York City for the first time. Sometimes they end up in a hostile area by mistake."

Some people are also unwittingly encouraging problems with mountain lions. Homeowners should keep their pets inside at night and stop feeding natural prey such as deer or raccoons.

Another major cause of lion problems is encroaching civilization. Many homes are being built in traditional lion hunting grounds, such as the foothills around Evergreen and Boulder. In many areas, these developments have replaced ranches. Many ranchers allowed hunting; residential subdivisions do not. Hunting also is banned in some prime deer and lion habitat, such as Boulder Mountain Park. As a result, deer populations are unnaturally large around many of these parks and neighborhoods. And some mountain lions, like deer, have lost their

Colorado Lions continued

natural fear of man in these areas. "You can go to Boulder these days and see deer roaming around town. That is not natural," said Steve Bissell, educational director of the division of wildlife. "There appears to be some change in the behavior of lions in the urban area. They are not as wary as they were in years past."

Mountain lions traditionally roamed around Colorado's mountainous areas, at elevations of 6,000 to 10,000 feet. Recently, though, lions have been spotted as far east as Burlington.

As the mountain lion population has increased, so has the interest in hunting them. Last year, 687 hunters bought state licenses to kill cougars. The total kill was 229 animals. Just 10 years ago, the state sold only 248 licenses to cougar hunters, who killed 107 of the cats.

This year the lion hunting season will continue from November 11 to December 31. Licenses will cost \$30.25 for state residents and \$250.25 for nonresidents.

Condensed from an article by Mark Obmascik
The Denver Post Newspaper

Contributed by Cindy Campbell

Meanwhile, on the East Coast . . . Florida Panther Update

The recent deaths of the last two female Florida panthers in Everglades National Park means the cats are functionally extinct in the Everglades, which had supported nearly a quarter of the entire Florida panther population for more than a decade.

The two males remain in the area but are expected to leave the protection of the park soon to search for other females, says Dennis Jordan, panther recovery coordinator for the U.S. Fish and Wildlife Service in Gainesville.

Discovery of high levels of mercury in the tissues of the dead panthers raises the question of whether the Everglades habitat is safe enough for scientists to try to establish another population there, Jordan says. Only an estimated 30 to 50 Florida panthers remain in the wild throughout the state.

reprinted from The International Wildlife Federation Newsletter

New Book Available



The Natural History of the Wild Cats

by Andrew Kitchenor 1991

reviewed by Brenda Messling

Chapter 1. How to be a carnivore - pelage, senses, movement, capture and killing prey

Chapter 2. Cats of the past - palaeofelids, neofelids, sabertooth etc. How present day cats differ or are similar

Chapter 3. Who's who of cats - similar to NWF book. Paragraphs on each species, short chapter over all.

Chapter 4. Killing and Eating - Hunting strategy, how to, hunting success, cooperative hunting, predator/prey populations, prey switching, cycles, competition

Chapter 5. What do cats eat - diets compared of different cats

Chapter 6. Living together - visual communication, contact patterns, olfactory communication, scent marking

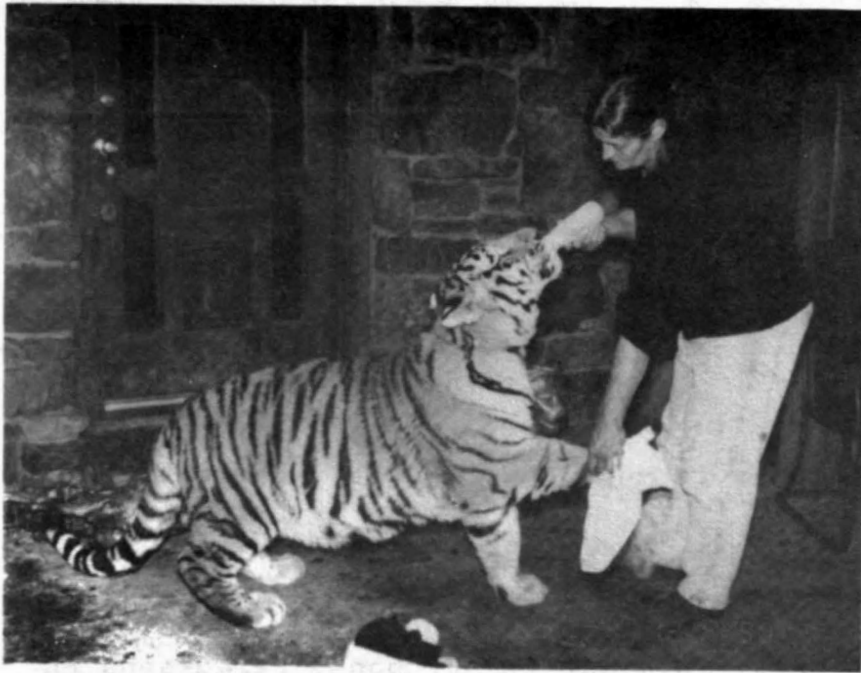
Chapter 7. Cats nine lives - finding a mate, oestrus, mating, gestation, parturition and lactation, development of kittens, infanticide, social cats, diseases and parasites, mortality and survival, population regulation

Chapter 8. Cats and Humans - ancestor of domestics, domestication, genetics (i.e. color) exploitation, conservation, (problematical, cheetah) man-eaters, reintroduction

Appendix - measurements and body weights for all cats in different localities

large bibliography

All photos are of little known small cats species. Abundant information on the small cats. No large cat photos. Some info is over my head, yet I am absorbing a bit at a time. Definately *not* a coffee table book. Lots of graphs and tables. Dr. Andrew Kitchenor is Curator of Mammals and Birds at the Royal Museum of Scotland in Edinburg.

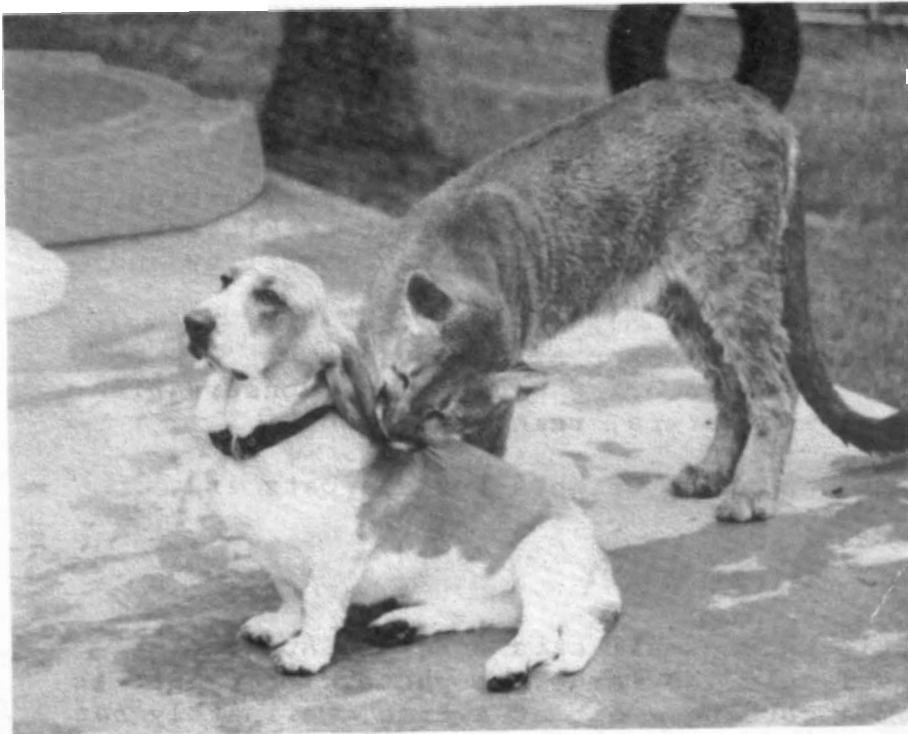


Like the commercial says, "You Never Outgrow Your Need For Milk". Betty Young bottle feeds one of her many tiger "kids".

Tis The Season (



"Kids and Kittens" a 14 week old German Shepherd puppy from last summer.

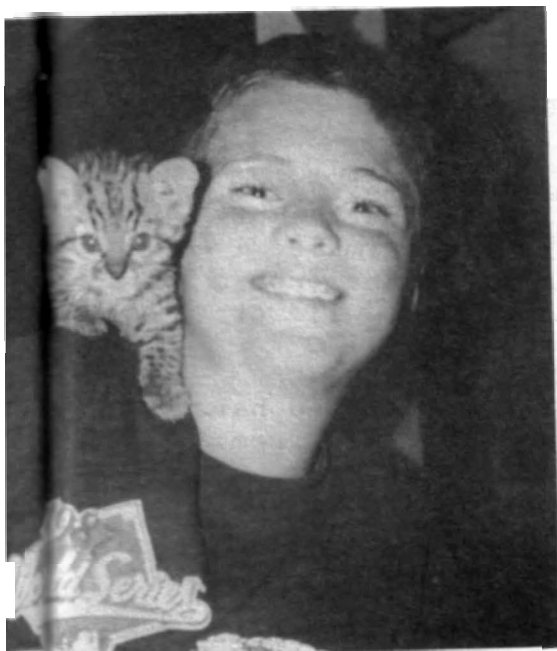


The dog is known as "Man's Best Friend" but in this case it is cougar's best friend too. Spirit loves Pup, the Basset hound. Spirit, who now has a male cougar companion also, lives with Su Kalb and family.



Donna Amos photo was taken but love her.

Of Peace And Love



ns', [redacted] Perry's son, Jay, with
Geoffroy cat kitten, born this



now leopard Tillisha. This
ken in May of 1990. Can't help



Wazu, who doesn't realize he's a
serval, loves his persian "brothers".
He's pictured here with his human dad,
Dwayne Mayer.



Jayne Anderson with serval Natasha,
doing their "serval thing". Natasha,
who lives with Niki Martin, has a
special relationship with Jayne.

Readers Write



Dear L.I.O.C.,

My name is Robert M. Merkel. I wanted to write and just say thanks for being there. Until recently I thought I knew just about everything there is to know about the keeping of exotic animals ranging from snakes to cats; but I am very wrong. All of the exotic cats I've been in contact with have either been treated as wild or have been raised from kitttens to be very tame.

I have only been a member of L.I.O.C. for a few months and have learned a lot from your three newsletters I have received and from the few membes I have been able to talk to; especially one Mr. Chandler of Stover, Missouri who really gave me some good advice.

Last April I purchased a 2 year old female bobcat named Aurey from an abusive home out of pity. At first apprearance she appeared to be a wild caught cat with the exception of her purchase documents the woman owning Aurey had. Now I own an animal that although has become very house broken still will not allow herself to be touched in any way. I have been able to teach her about the kitty box, and have finally been able to change her diet to a proper one. After months of frustrating work she now appears very tame as she lays regally surveying her kingdom from atop the couch.

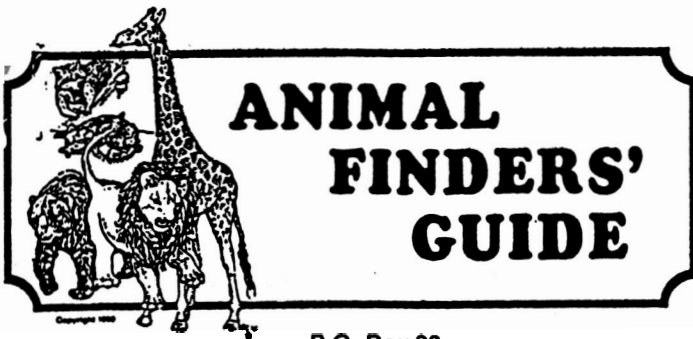
After some months I have been able to track the original owner of Aurey and found that she was a tame cat for her first year and a half of life. It is only after having been beaten with a night stick by a male owner and then stuck in a too small rabbit cage by a female owner previous to me and teased by children, that Aurey came to the above condition. I have been able to overcome all obstacles set by Aurey except am receiving staunch resistance when attempting to touch or pet her. She will follow me from room to room and only when guests are over will she hide herself. Is there anyone that has had any luck in either taming wild cats or abused ones? I would appreciate any and all advice I could get. I will be ordering a video and the Exotica guide from your last issue looking for some guidance. Again I thank you.

Sincerely,

Robert m merkel

Robert M. Merkel

19 Little Creek Lane, Fredericksbury, Va. 22405 (703) 371-2769



P.O. Box 99
Prairie Creek, Indiana 47869
(812) 898-2701

October 14, 1991

Editor
L.I.O.C. Newsletter
P.O. Box 66040
Portland, OR 97290

I just read a recent copy of the club publication and felt the need to comment on what I read.

To introduce myself to those members who may not know me, my name is Pat Hoctor. I own the Animal Finders' Guide publication and I breed and raise many exotic animals. I also broker for several zoos and private breeders. I also sell through and have purchased from auctions.

As I read many of the articles, it is obvious that those writing them know little about the exotic animal business or, most especially, the history of this business. The writers are very guilty of tunnel vision. They have no overview. I am also amused by the fact that some of those criticizing dealers or breeders are those that got their start from our animals or information received from us.

In every species we have ever dealt in, we have encountered the same thing. It is okay for a little click of folks to buy a handful of stock they want for pets to show off with, but those that are really saving the species by breeding them are bad guys because they sell animals. The interesting thing is that when one of the "click" sells an animal it's okay, or if they buy it's okay, just all other sales or purchases are wrong. Get real!

I, and people like me are not gods, we make mistakes. The only reason any of you have your beloved pets is because of us and those like us, that were before us. It is not a hobby to us. We know what we are doing because we have spent years applying ourselves to a profession we love and enjoy. We don't guess about diet or proper housing. We know what is right through years of experience with dozens of animals.

We are more concerned about proper legislation than any of you, for it decides our living, and what we have chosen as our life occupation. Fred Boyajian, who was at that time president of your club, tried to place you on a path of responsibility and political input years ago, but the members wanted little or no part of this. They basically wanted a social club.

My friends, your problem isn't with those of us who professionally deal in exotics. It is with yourselves and those like you, who talk lots about responsibility and then take your pets out on a leash and scare the neighbors half to death or tire of an animal that was your pet and surplus it to another untrained person.

This article could go on for pages but the point is simply this, there is good and bad in all facets of life. No amount of finger pointing is going to solve the problem. There are bad pet owners and bad dealers. We must all work together to solve the problems, for legislators will always find it easier to throw the babies out with the wash water than properly deal with the problems. The same laws that protect the good also protect the bad. The legislation that controls the evil will also remove freedoms from the just.

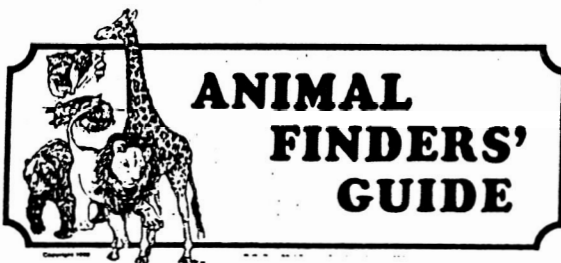
Why, instead of seeking a segment of this business to blame, don't we all work together and find answers to the problems we all know exist.



Pat Hactor

PDH/bm

cc: Fred Boyajian



18 ISSUES A YEAR. Informative articles on exotic animal husbandry. Exotic animals, auctions, products and services advertised \$25.00 a year. P.O. Box 99, Prairie Creek, Indiana 47869

Dear Shirley,

Enclosed are some newspaper articles that might be of interest to members along with a snapshot one of my new feline friends who was visiting in my area enroute home to the Carolinas. I gave the owner all info on our organization and encouraged her to join.

Received the coveted Lottie and was very pleased to have my name added to the list of recipients. Since joining LIOC in 1969 the club has been of much assistance and support when needed for both legal and medical problems. I cherish the friendships made with my feline friends and their owners.

Just to update fellow members on my clouded leopard, 4 year old male, he is still a marvelous work of art and a delight to share my life with.

Sincerely,



BeeJay Lester

Dear Shirley,

The newsletter stated you need photos suitable for front page publication. I'm sending you some lazer copies of Al Porges' snow leopard and my leopard cat hybrid, Phoenix.

Al has been spending much of his free-time instructing me in feline care. He is also preparing me for state and federal permits. I hope to be ready soon for my first *real* exoitc cat. I want to take this the time to let the membership know how much I appreciate the help Al and the LIOC ESCF has, and continues to provide to me.

I am a member of many feline conservation organizations, but only LIOC ESCF has taken the time to help me with my avocation, to help felines.



Ron Eldridge


We appreciate hearing from the membership. It is communication between the members that will help our felines. If you have a problem, a solution, a suggestion, a question, write it down, and send it to the newsletter editor. Comments on the newsletter, or particular articles are also welcome.

Sell Yourself, Sell Your Products in the Newsletter

Did you know that the LIOC ESCF newsletter accepts advertising from members? For the modest price of ten dollars, you can place a business card sized ad in a newsletter of your choice. Because of the infrequency of the issues, you may debate the value of ads. Well, think a bit differently, and you will realize what a value there may be in an LIOC ESCF ad: How about advertising the species of cat you normally breed? This would be a great way to get buyers *before* the litter planning! Offer your services or any products you may generally provide. Where else can you access hundreds of wild cat owners and fanciers. Or specifically target so many potential wild cat buyers?


To advertise, simply send photo ready ad or the copy you desire (we will lay it out for you), along with your check for ad payment to the Advertising Director. Cutoff for a particular issue is normally the 15th of the month preceeding the issue month, i.e. December 15th for the Januray/February issue.

Ads that are not referring to cat sales may also be placed by non-members. Additional ad sizes and yearly rates are also available: write or call the Advertising Director for more info.



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Convention '92 - San Antonio

GET READY FOR CONVENTION 1992. IT WILL BE HELD THE MIDDLE OF AUGUST. LOOK FOR THE EXCITING DETAILS IN THE JANUARY/FEBRUARY 1992 ISSUE OF THE LIOC NEWSLETTER. ONE OF THE SPECIAL GUEST SPEAKERS WILL BE MICHAEL TEWES, OCELOT & JAGUARUNDI RESEARCHER FOR THE CAESAR KLEBERG WILDLIFE RESEARCH INSTITUTE. PLAN AHEAD NOW TO BE THERE!

GROUP REPORT
By Peter Jackson Chairman



The big cats do not always help us to promote their image and conservation. All too often some of them can be problem animals, especially as they are more and more confined to islands in the human sea. Thus, while the Deputy Chairman Paul Joslin, has been preparing the cat conservation strategy and action plan, the group has had to deal with several current problems. Most of these problems involve predation on livestock and, sometimes, manslaughter, but in the case of the African leopard, it is how to deal with a large population.

The Leopard in Sub-Saharan Africa

The leopard was barred from international commerce by being put on Appendix I of the Convention on International Trade in Endangered Species (CITES), although listed as "Vulnerable" rather than "endangered" in the IUCN Red Data Book. It was obvious that there were still many leopards in Africa, and several countries, while not wishing to open the fur trade, still allowed sport hunting. CITES agreed to quotas for international movement of trophies. In the light of the debate on whether the African leopard met the criteria for being on Appendix I i.e. a species threatened with extinction which is or might be threatened by trade, CITES asked Rowan Martin of Zimbabwe's Department of National Parks & Wildlife Conservation and Tom de Meulenaer of WWF Belgium to report on the status of the leopard in sub-Saharan Africa. They constructed a computer model based on the relationship between reported leopard densities, rainfall and the amount of suitable habitat, on the grounds that predator densities are ultimately limited by food resources, which are in turn limited in Africa mainly by rainfall. In particular they proposed that the leopard, if present in suitable habitat, would generally be at the maximum density at which they could occur as densities are unaffected by harvest unless the rate of harvest exceeds some threshold, i.e. leopard populations could either sustain the harvest or go extinct.

Based on their computer predictions that there were about 700,000 leopards in Africa, Martin and de Meulenaer argued that the leopard did not fulfil CITES criteria for inclusion in Appendix I, but should be on Appendix II, which provides for controlled trade. They suggested that African countries should have the right to exploit their leopards.

Views of Leopard Specialists

Leopard specialists consulted agree that there are still many leopards in Africa, especially in certain areas. However, those with extensive field experience believe leopard numbers may be less than half that predicted by the computer model and state that there are many areas suitable for leopards which have had none for years.

LEOPARDS - Continued

Eight of sixteen reviewers firmly opposed moving the leopard from Appendix I to Appendix II of CITES. Four were in favor, but recommended rigorous controls, with exploitation restricted to trophy hunting. Four did not express a clear opinion, but appeared to favor Appendix II with appropriate controls. There was no sentiment in favor of reopening commerce in skins. However, several reviewers considered that trophy hunting, properly controlled, was both possible and even advisable since it could encourage livestock owners to allow some leopards to survive instead of wiping them out as pests.

Despite criticism of the report, it should be recognised that it is an important contribution towards assessing populations of secretive species, and it poses highly relevant considerations on management and not only of leopard.

Amur Leopard on the Brink

The Amur leopard (*Panthera pardus orientalis*) which inhabits border areas of northeastern China and Soviet Far East, is also on the brink. Our Russian colleagues estimate fewer than 40 left in the wild. They have requested cooperation in obtaining surplus Amur leopards from North American and European zoos for a captive breeding program and experimental release in the wild to ease the problem of inbreeding.

Getting to Grips with the Snow Leopard Situation

The snow leopard appears to be more numerous than was thought. However, there are probably not many more than 5,000 spread over a wide arc in the Central Asian Highlands. They are threatened by livestock owners, who kill them as predators while at the same time increasing their stock to the detriment of the snow leopards' natural prey. They are also poached for skins, principally in China although the snow leopard is on Appendix I of Cites. The Indian Government is launching Project Snow Leopard on the lines of Project Tiger, using the same ecological approach of saving and rehabilitating habitat. Better livestock husbandry to reduce predation is important. Our colleagues in the International Snow Leopard Trust are principal coordinators of the overall program.

Condensed from CAT NEWS

Whoops!

The last issue of the LIOC newsletter did not have a date printed on the cover. So members, get out a pen and write on the cover Volume 35 Number 5, September/October 1991.

July Meeting Report

We held our meeting at Swede and Marlene Trudeson's place in St. Helen's Oregon. For being so far out for most people, we had a fairly good turnout with 38 people and 13 cats.

The new regulations in Hillsboro were talked about. The city has changed their rules so that the only "exotic" animals that are allowed are one's native to Oregon. This new rule will effect a couple of our members, who have brought property out of the city. Hopefully they can get moved before the rules goes into effect.

Next was Convention talk. We took a head count and we will have between 13 - 16 of our members at Convention. As all are flying except for Ralph and Connie Miller, they offered to take all of our sale table and auction items with them. Thanks guys, that really helps.

We had our usual raffle and Bruce Bobst, a member, won the dollar game. The rest of the day was spent snacking and visiting.

See ya at Convention, Gayle



August Meeting Report

August was a busy double day held in the home of Steve Belknap and Don Booth. For these unable to go to Convention, a report was given by those who did.

I reported the club sent Addie Lindstrom of "Addie's You and I Travel" a huge bouquet of flowers as a thank you for all of her work on the convention. Our branch presented Jerry and Addie with a gift certificate for Sunday Brunch at Cals on the River as our thank you for their work also.

A new member Darryl Scheel gave a talk on Dino, his young igunna. Everyone enjoyed hearing about him and touching him. Nancy Chlarson gave a talk on her pot belly pigs she brought and Jackie Vanderwall talked on her new Coatimundi baby.

We had our raffle and the dollar game was won by me and the money was donated back to the club. Since this was to be a meeting and picnic we adjourned and started with a pot-luck picnic while Steve and Don fixed hamburgers and hotdogs.

We had a total of 53 people (signed up 5 new members) and several animals which included 3 cougars, 1 snow leopard, bobcat kittens, chaus kittens, 3/4 chaus 1/4 domestic kittens, 1/2 chaus kittens, siberian lynx kitten, pot belly pigs, iguana and the coati. Good time was had by all. See ya, Gayle

PACIFIC NORTHWEST EXOTICS REPORT continued

September Meeting Report

We went up to Everett, Washington for this meeting. We feel it is only fair to our members in that area to have at least one meeting a year up there. Doug and Bernedette Pakswinski hosted the meeting. Being so far for most members we only had 14 people and Doug's 2 servals and a bobcat/lynx hybrid present.

We talked about the different laws between the 2 states. Also talked about the problems of the black leopards that had been taken away from their owners.

We talked about different diseases. A report was given on the kitten with leukemia and what had been done.

Had our raffle and Connie Miller won the dollar game. Before we left, did sign up one new member for LIOC

See ya, Gayle

October Meeting Report

Addie and Jerry were our hosts this meeting. It was a bit of a stormy day, the threat of rain was upon us. As people arrived with raffle gifts, food and kitttens it was really hard to get the meeting going.

Problems of the day were trying to get more information on the black leopards since one had died. Since Jim was not at the meeting all we had was second or third hand information. John Van Stry was appointed to find out first hand from Jim and report back to the membership next meeting.

Next Steve Belknap gave a report on his encounter with Fish & Game Department. He has big beautiful caging for his 2 cougars and doesn't want them on cement. Fish & Game wants cement. He went to court but nothing was decided at this time.

Next we talked about the Club giving 3 veterinarians the membership uses, membership to LIOC with the Christmas special. One on the east side of town, one on the west side and one in Washington. It was agreed.

We then talked about the next meeting, which will be the last of the year and we'll be having nominations for officers. People were reminded only members with LIOC memberships could run for office. Gayle gave a little talk about when the club was started, how it was started and why it was started. She told the members how she had watched it develop and grow. How proud she was on how through the years, the goals she had hoped for had been accomplished. That she was very tired and would not be able to carry on as an officer, (she had been in office since day one) Wishing the best to those who may be elected.

We then had our raffle and a guest won the dollar game. We had 40 people present along with 2 bobcat babies, 1 bobcat teenager, 3 cougar babies, and Jerry's 3 cats. Gayle had pictures of Starr (chaus/domestic hybrid) with her new babies.

The rest of the day was spent playing with babies and visiting.

See ya, Gayle

The Little Cat That Packs A Big Punch

By Ron Eldridge

Geoffroy's cat (*Felis geoffroyi*) is one of the smallest wildcats on earth. Average weight ranges from 4 to 8 pounds. There are four contiguous subspecies currently recognized: *F.g. euxantha*, *F. g. paraguayae*, *F. g. geoffroyi* and *F. g. salinarum*. Other common names for the Geoffroy's cat are Geoffroy's ocelot and gato montes (mountain cat).

The Geoffroy's cat is a rugged feline. It has survived in some of the most formidable terrains. At 1,000 feet on the Antiplano in Bolivia, a barren windswept plateau of salt flats to the "Green Hell", a vast central lowland area along the eastern slope of the Andes of northwest Argentina. It can survive and thrive in the hottest temperatures in all South America. The Geoffroy's cat is the only short-haired cat that can thrive so far from the equator. From the heat of the "Green Hell" to powerful cold winds and never ending dry prairies with continuous dust storms, the Patagonia area of southern Argentina, a vast, sparse region inhabited by hardy Aborginial Indians, and you guessed it. . . the Geoffroy's cat.

If adaptablitiy is the key to survival in this ever-changing environment, this little feline may out survive all other cats in the wild!

Reported to be nocturnal, the Geoffroy's cat will hunt mainly rodents and birds. He will utilize both trees and open land for hunting. Mainly terrestrial, he will use any available cover to hunt, avoiding wide open spaces, moving from rock or bush when possible.

It has been reported, as as pet, the Geoffroy's cat will avoid crossing an open room, preferring a serpentine movement from one chair to another, until he reaches the other side of the room.

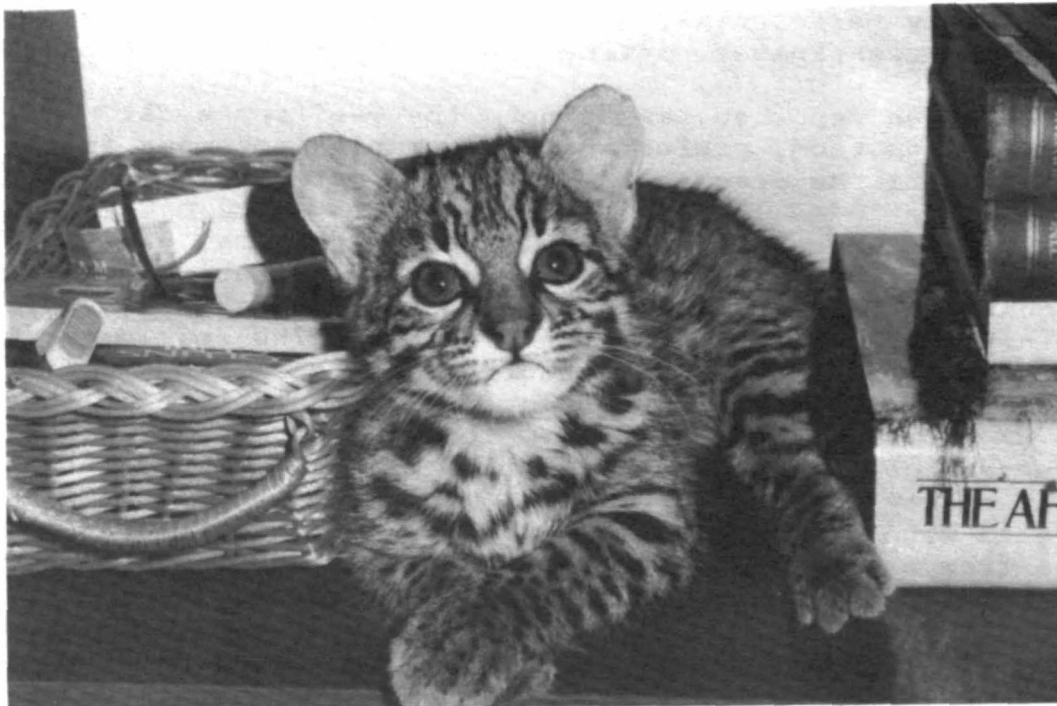
Geoffroy's cats obey basic rules of wild animal genetics. The large cats are from the southern quarter of Argentina. They have longer coats which are waterproof (like seals), and the undercoat is dense. This coat helps to conserve body heat. The smallest cats are from Paraguay. Here the coat is shorter and is coarse and lies close to the body to help keep the body cooler in the heat near the equator.

The coat color also changes with geography. Coat color ranges from silver-gray through ocher-yellow to brownish-yellow. All cats are covered with back spots of nearly equal size placed at equal distance from one another. Some cats have markngs on shoulders and flanks which tend to form rosettes and wavy lines. The head is streaked and spotted. the tail is spotted and ringed. Like many wild cats, the Geoffroy cat's ears have the white spot behind each ear and something special - a white spot on the very tip of the tail.

The paw pads are usually dark, the nose a brick red and eye color that ranges from clear gold to amber. He is usually 18 to 27 inches long with an average size of 23 inches. Tail length average is 14 inches. As previously stated, weight ranges from 4 to 8 pounds. Some males may weight up to 12 pounds, and females are about 6 pounds.

Although Geoffroy's cats breed fairly easy in captivity, the status of the species is reported to be bleak. "Fifteen percent of the current population is inbred with 6 percent being highly inbred (F 0.25%). Current pairing of Geoffroy's cat will produce inbred offspring in 50% of the cases. Only 14 cats (6.8) contributed to the current gene pool, and of these, one male contributed 20% of the genetic material.

One report found that the genetically effective population size (NE) is less than 20 cats. All current animals in the ISIS North American population (save possibly one male) are subspecific hybrids or of unknown ancestry. A large number of cats are held by the private sector, but the inbred level and subspecific status of these cats is not known. No extensive research had been conducted on the Geoffroy's cat in captivity until 1985. In 1988, a long-term study was completed by Dr. Gail Foreman (see Foreman, G.E., 1988 Behavioral and genetic analysis of Geoffroy's cat, *Felis geoffroyi*, in captivity. Ph.D. dissertation, The Ohio State University) Genetic management of the Geoffroy's cat in captivity in North America: inbreeding, subspecies and the inheritance of melanism, ZOO BIOLOGY.



Mancha, a male Geoffroy's cat, 14 months old
owned by Jeff and Scarlett Bellingham

Geoffroy's Cat Continued

Litters consist of usually two to three kittens. The kittens are born with lush undercoats which are fully spotted. Sexual maturity is at about 1 1/2 years. Geoffroy's cat has been reported to breed easily in captivity. Although disagreement exists in the breeding with domestics, some breeders have reported enough unrelated blood lines to maintain genetic vigor. Writers note: I have no opinion on this subject to date, and believe that the scientist and the breeders should open a dialog with each other for the betterment of the Geoffroy's cat.

CITIES (Convention of Trade of Endangered Species of Flora and Fauna) enacted in 1974; an agreement between nations to regulate trade of endangered species, classified the Geoffroy's cat as APPENDIX II, which means trade is strictly regulated, but is still allowed.

The Geoffroy's cat's greatest danger is **MAN!** The little cat has few predators in the wild. Man and habitat disturbance with over harvest for the fur trade are the greatest threat to the cat's existence.

It is said that 100 Geoffroy's cat's pelts are needed to make one full length woman's coat - think of it, 100 cats for **ONE COAT!**

In the few minutes it took to read this article, five species of flora and or fauna became extinct, before they were even known to exist and be described by scientists. **REMEMBER - "EXTINCTION IS FOREVER"!**

References: International Society for Endangered Cats, (ISEC)
"The Geoffroy's Cat" Patricia Nell Warren LIOC 1980

About the author: Ron is a native New Englander. He is an amateur naturalist specializing in the smaller felines. He is a graduate of Boston University with a degree in both Physics and Zoology.

*Christmas greetings and best wishes
for a very happy New Year*



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New Arrival Announcement

A pair of margays (*Felis wiedii*) arrived at the ExotiCare compound shortly after convention in August. The two represent the humble but proud beginnings of ExotiCare's endangered cat breeding program. They were purportedly zoo-born and have spent the last twelve years in three different U.S. zoos, never successfully reproducing. They were placed with ExotiCare in hopes that the private compound would be more successful. (And obviously because the zoos had given up!)

The tiny ones arrived in an extremely shredded shape, having obviously fought continuously. Although they represent a good husbandry challenge, they are already looking and feeling much better. A lot of space and two separate sleeping boxes helped from the start. They learned to climb on their tree limbs and perches after a few weeks, but are nowhere near as acrobatic as if they'd had the privilege from birth.

Preparations with the ExotiCare Veterinary Advisor for potential embryo transplant operations have begun, a plan that will be implemented in the next year if no successful breeding takes place by that time and pending the testing of the male for fertility. No matter the success of breeding efforts, like the other ExotiCare cats, they are at least much happier and much healthier than they were before. Welcome and good luck to Beta and Lyra.



Beta and Lyra margays. Katie reports there has already been mating activity. Perhaps by next spring. . .