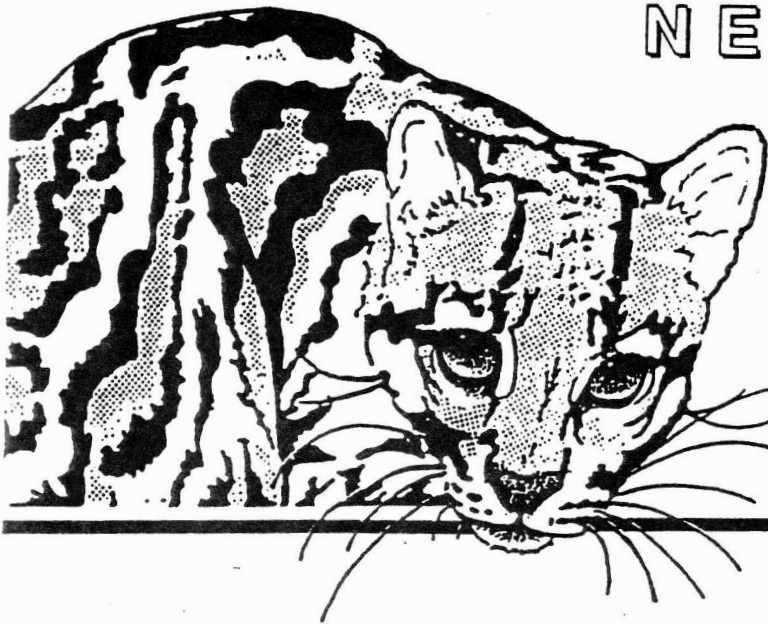


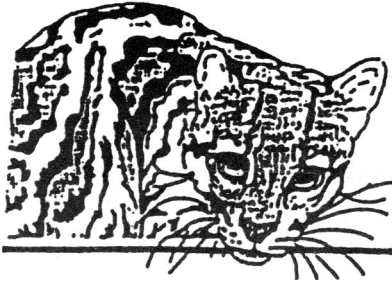
NEWSLETTER

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Catnappers! Pictured above are Mali and Dune, young caracal lynx, who live with Canadian LIOC members, Jeff and Scarlett Bellingham. Caracal Lynx are wide ranging, being found in virtually every habitat except for rain forest from central India through southwestern Asia, Arabia, North Africa and throughout the rest of Africa south of the Sahara. Scarlett reports these two cuties are very sweet-natured felines.



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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Behavioural Enrichment For Exotic Felines

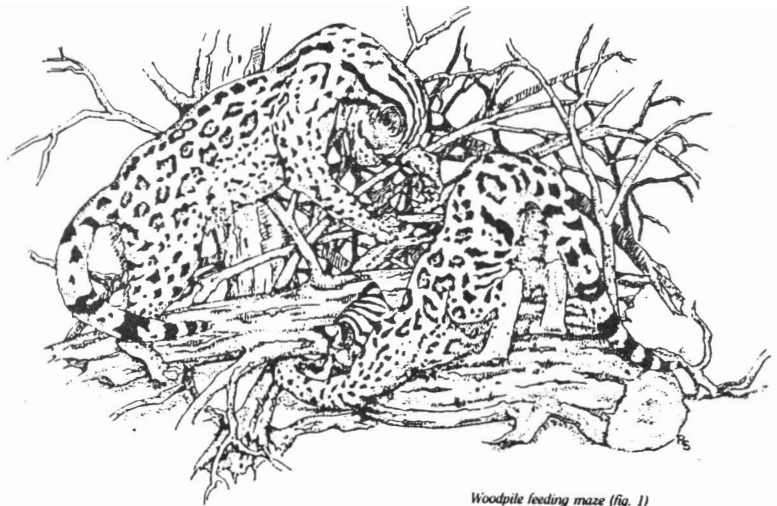
By Graham Law, Head of Carnivores, Glasgow Zoo, Scotland, U.K.

Behavioural enrichment for cats can take many forms but often revolves around alternative feeding methods. It has long been the practice in zoos to feed their cats once a day with perhaps one or two fast days per week. It is probably acceptable to feed large cats, such as lions or tigers, once per day, but small cats definitely benefit from more frequent food offerings. Feeding small cats three or four meals per day not only breaks up their day but may also help to reduce pacing as the cats do not have to wait until evening to be fed.

It is also good practice to feed whole foods to carnivores to stimulate as much natural behavior as possible. Whole foods such as dead rabbit and chicken have to be plucked of hair and feather before being eaten. Even then consumption is not straightforward when compared with meat cut from the bone or prepared carnivore diets. Intestines, for example, are not normally eaten along with their gut contents. Intestines are pulled into the mouth with a rasping movement of the tongue, through lightly-closed incisor teeth. This action helps rid the intestines of any indigestible plant matter contained within. In short, feeding whole foods is an anatomy lesson for the cat and is far preferable to the prepared cat food now often used. Whole food also helps to keep teeth clean, a factor that was often forgotten by people who turned their entire feeding routine over to artificial diets. In one zoo where such a feeding method was used for tigers, the animals had to be knocked out every six months in order to have their teeth cleaned.

Although offering food three or four times a day is better than the one feed, this can still be greatly improved upon by the use of some simple devices. One of the simplest and most effective of these, used for the ocelots at Glasgow, consists of a pile of twigs and branches heaped together to resemble a small bonfire. The food, - chopped meat and eggs - is hidden between the branches of the woodpile. The ocelots have to show a great deal of skill and dexterity to both hook out the meat and retrieve the eggs without breaking them.

The woodpile method of feeding is normally used just after midday (approx. 1:30p.m.) when the ocelots have settled down at the back of their cage for their afternoon sleep. This feed thus encourages the animals to come down into full public view for a prolonged period of time. It has been found that the cats continue to search for food in the woodpile long after it has all been taken.



Woodpile feeding maze (fig. 1)

Behavioural enrichment does not stop at alternate feeding methods. All manner of behaviour can be stimulated by giving the animals access to different textures and substrates. The fact that some cats like to cover up their feces, for example, should not be forgotten. Cats obviously have an inherent need to do this and should be supplied with a suitable medium to allow this task to take place. If peat-filled trays are used, this has the advantage of localizing feces collection. Also the nature of the peat breaks down the acid of the urine and reduces smell. Such simple techniques may also prevent fouling their water bowls - an undesirable captive behavioural trait.

Animals should be exposed to as many different textures and substrates as possible - real rocks, plants, water, trees, sand and forest bark. In days gone by, concrete floors provided a good surface to disinfect. These floors can be greatly improved by covering them with forest bark. Forest bark, once laid, is kinder and more natural than concrete on the feet, and providing the enclosure is not overstocked, needs changing only once or twice a year. Over this period of time the woodbark builds up useful bacteria, which help break down waste matter.

Natural plants and rockwork should always be used in preference to artificial substrates. If we are talking about preserving animals in captivity for eventual re-introduction, it is essential that we expose them to as wide a variety of natural materials as possible. It would be ridiculous to introduce an animal which has been housed its entire life in a concrete, metal, and glass enclosure with fibre-glass logs and trees into the natural world.

Without a doubt, large boulders, and natural stone have a different density and feel to artificially-produced likenesses. They also smell and taste differently from their artificially-produced counterparts. Similarly, real plants have many more uses than artificial ones. Real leaves can be chewed and tasted, and falling leaves not only denote the changing of the seasons but also add a change to the substrate than can be played with or crunched under foot. Why is it that when leaves fall in an animal enclosure the keepers and zoo staff feel it necessary to clear them away immediately, when they are part of the natural rhythm of life? Trees and logs, of course, are useful for cats to climb and manicure their claws on. Cats do have a preference regarding the texture of timber and they use to trim their claws on and some logs are regarded as better than others.

When caring for an animal in captivity you should be aware of what senses it possesses. It is easy to overlook particularly pronounced senses such as smell, just because we as humans do not have that sense particularly well-developed. For instance, bears have an incredible sense of smell and use a large part of their brain to interpret smell. How often do we really call this sense into use in captivity? Sight, sound, touch, and taste - every one of these senses we should try and stimulate on a daily basis, whether it be hiding food for the animals to find with its nose or laying scent trails for the animal to follow. In recent years some interesting work has been

carried out with smell to elicit behavioural changes. It was found, for instance, that red-bellied tamarins reacted to the scent of a predator when margay odour was added to an area of their enclosures. (Nancy G. Caine and Paul J. Weldon). It is also possible to purchase aerosols of lion scent which gardeners have found effective in deterring certain animals from their gardens. Would it not, therefore, be possible to stimulate a hunting response in captive carnivores by using the odours of their natural prey species in the wild in their enclosures? Cats in general are known to react strongly to scented soaps and perfumes. They often display cheek-rubbing and kitten-like behaviour when exposed to such olfactory stimulants. In this area alone there is much scope for behavioural enrichment.

The very design of animal enclosures should be linked as closely as possible with the senses of the animals it has to house. In the wild, for example, cheetahs are known to seek out high vantage points to view the surrounding territory. It is therefore good practice to provide cheetahs with a large earth mound or, better still, a tall viewing platform for them to survey the surrounding zoo, and also perhaps to spot the keeper on his approach with their feed. Cheetahs use their eyes to locate food and it is good to give them as much visual stimulation as possible.

condensed from Management Guidelines for Exotic Cats
by The Association of British Wild Animal Keepers

Many species of feline would benefit from a platform, such as cougar, leopards, or any aboreal feline. In addition to platforms large limbs, tree trunks, and wooden ledges will improve their mental well-being and increase activity levels. Our cougars all have towers in their enclosures, and while they use them year round, on the hot days of summer, they practically live on the top, shady levels of their towers, enjoying a commanding view of their human slaves at work.

Felines leave territorial scent messages when they sharpen their claws on trees. Even a declawed feline would appreciate the presence of logs in their enclosures. Ours all go through the motions of sharpening their claws, but they are also rubbing their paw pads along their logs to lay down territorial scent marks.

As for substrate suggestions, efforts should be directed towards suitable flooring besides concrete. Everyone knows that is very hard on footpads, and joints. Larger enclosures, featuring natural earth, washed gravel, sand, or sod flooring, is highly preferable, from the feline's point of view. Care must be taken to take into consideration the drainage of the particular site, if ground contact is planned. If necessary, drainage pipe may need to be laid.

To provide for our cougars' desire to bury their feces, we provide several wheelbarrow loads of rough cut sawmill wood chips. This is not the fine sawdust from a planer operation, but more like the chips produced from a chainsaw. These piles are placed in three corners of their enclosures, and as used, eliminate odor before the feces is removed each day, and the woodchips break down into harmless

humus after awhile. When they are sufficiently reduced in size, I just add a few more wheelbarrow loads. Sand piles could also be used.

Other suggestions for behavioural enrichment I have read about included Howlets Zoo's suggestions of feeding servals by suspending their dinner from the roof of their cage, to elicit their remarkable jumping abilities. The lead keeper of the Topeka Zoo, Gretchen Ziegler, wrote in the January Animal Keepers Forum that they regularly spread fresh herbivore dung, from their regularly wormed hoofstock in various places in the lion exhibit. The pride of five lions go crazier over the dung than housecats do over catnip, she noted. They roll in it, defend it from others, and even ingest some of it. This frenzied activity can last for 20 minutes to several hours.

I have definitely noted some strong reactions from my cougars when I visit them after working our Spanish goats. Mercury is especially concerned about rubbing his scent glands all over my pants and boots. Fresh hay, when brought in to replace their soiled house hay is another sensory stimulus ways thoroughly checked out. Perhaps they smell mice from the barn, or even other invading wildlife scents such as possum or the cow dung from the field's fertilization process.

Unlike the domestic cat, many exotic felines enjoy swimming or playing in water. A heavy gauge molded plastic kitty pool, or metal stock tank, filled with water and their favorite toys can supply many hours of fun during the hot days of summer. We have even caught perch from our creek, and stocked the kitty pool. Tara really loves to fish!

Attracting wild birds, by providing a birdfeeder nearby the compound would provide mental and visual stimulation. That sort of flitting stimulus would surely entertain a captive feline.

Management Guidelines for Exotic Cats, was produced by the British Wild Animal Keepers. It is interesting to note the difference in feeding and environment philosophies across the ocean. Caretakers in the United States who are USDA licensed are restricted by the federal regulations and specific demands of our individual inspectors. In the United Kingdom, a more natural approach to nutrition is practiced, rather than the complete reliance on frozen horsemeat hamburger, as practiced by America's major zoos. Fear of bacteria is one reason American zoos shy away from whole animals. I try to reduce the risk of such an event in my feeding schedule by freezing for weeks, all chickens and rabbits before feeding them to my cougars. Also, I remove all stomach and intestines before feeding. A whole animal may offer an anatomy lesson, but these plant-filled body parts surprisingly, initiate the spoilage of the muscle meat, not to mention, contain many types of bacteria, some of it harmful.

So much of our captive feline's time is spent in their enclosure - look around at its "furniture", is it a bare room, or does it offer a variety of sensory input? There are so many easily accomplished additions and changes that can be made, there is just no excuse not to provide them!

by Lynn Culver

Fine May Help Save Ocelots In South Texas

Laguna Atascosa National Wildlife Refuge - A \$75,000 fine levied against a prominent New England Physician who smuggled ocelot, jaguar and mountain lion pelts into the United States is being used to save endangered cats in South Texas. Only about 80 to 120 ocelots are thought to remain in the United States - all in the brushy borderland along the Rio Grande and at least 30 in this 45,000 acre wildlife refuge. The fine from Dr. Edward Hager of Lyndeborough, N.H. and \$2,913 in interest will be used to buy a four wheel-drive vehicle and to continue research on the endangered animals.

Hager pleaded guilty in federal court to smuggling the pelts of animals killed in Mexico in 1985 and 1986. His co-defendant, Dr. Constantine Hampers of Dublin, N.H. was fined \$20,000 and ordered to pay \$180,000 to World Wildlife Fund, a non-profit organization working to preserve endangered species.

Hampers, whose wife is an undersecretary at the U.S. Department of Commerce, is a well-known kidney researcher who sold his company in 1984 for a reported \$360 million.

Assistant U.S. Attorney Anne Perry, who prosecuted both physicians, said neither Hager nor Hampers was sorry for killing three ocelots and two jaguars during guided hunts in the Yucatan Peninsula. At the time, the hunts were legal in Mexico, but importing the skins into the United States was illegal. Mexico has since outlawed such hunts. "No, (they were) not at all remorseful. To them, it was just another hunting trip," Perry said.

Hager and Hampers paid a Mexican citizen to bring the skins into the United States, where they were delivered to a taxidermist in Colorado who mounted the pelts in lifelike poses. The taxidermist notified government agents, who confiscated the stuffed cats after they were shipped to the doctor's homes in New Hampshire.

Hager, in a telephone call to the taxidermist, which was recorded, likened the killing of to "an assassination".

Usually jaguar hunts - which cost \$20,00 to \$30,000 - do not require great skill or tracking ability. A young farm animal, usually a goat, is staked out and a pit is dug to conceal the hunter. When the big cat arrives, the hunter shoots while the jaguar is temporarily blinded by a bank of floodlights.

Perry structured Hager's plea bargain so the fine would benefit the species of animals he killed. "We wanted the money so it wouldn't go to pay administrative costs, or something like that, but where possible to try and establish a reserve for the very species they're trying to preserve," Perry said.

Refuge manager Steve Thompson, who had not heard of Hager's legal problems, is thankful for a windfall that will pay for a field vehicle, reward local farmers who restore ocelot habitats and continue cat research projects on both sides of the Rio Grande. "The neatest thing of the whole story is it's sad when you hear about somebody shooting

animals you're trying to protect. But to actually have the money come back to help, I haven't heard of that happening in the 15 years I've been with Fish and Wildlife", Thompson said.

Wildlife biologists have installed radio collars on many of the ocelots in an attempt to conduct basic research on the cat's range, mating habits, life span and other traits. Without this knowledge, it will be impossible to restore the elusive cat.

After learning the funds would be available, Thompson called on a group of leading cat researchers to determine how best to use the money. The concensus was to continue to fund research conducted by the non-profit Ceasar Kelberg Wildlife Research Institute at Texas A & I University in Kingston, which has been studying wildcats since 1981.

"My first thought is "Why hasn't it been done extensively before?" said institute director Dr. Michael Tewes. "Trying to repair some of the damage that has been done should be the underlying reason for most judicial penalties, to form some kind of restitution. And hopefully, the attractiveness and utility of it will be applied by more judges in the future so all wildlife will benefit."

The Kleberg Institute is conducting an extensive research project in northern Mexico to survery the populations of ocelots and jaguarundi, a weasel-like cat even rarer than ocelots.

Ocelots, formally known as *Felis paradalis*, are small cats that weigh between 20 and 30 pounds - similar in size to the bobcat - but with a dramatic, leopardlike pelt, a slender frame and a long, 15-inch ringed tail.

"We know even less in Mexico about ocelots and jaguarundi than we do in Texas, and that's why we direct research efforts (in Mexico). We know that there are more jaguarundis in Mexico and we suspect there are more ocelots than in Texas," Tewes said.

Why study cats in Mexico when the purpose is to restore them in Texas? "The ocelots and jaguarundi don't recognize the Rio Grande as a border between countries," Tewes said. "Their population is continuous along the Gulf Coast."

Researchers say it is critical to the future of ocelots in the United States to determine if they are cut off from their Mexican and Latin American kin, making them extremely vulnerable to disease or natural disasters.

"We want to know if the cats in South Texas are genetically isolated from cats in northern Mexico, which has important conservation implications," Tewes said. "It's important to have more than one isolated population to avoid the possible disastrous effects of a catastrophe, such as a hurricane."

From the \$77,913 fine, \$15,000 will be used to buy a new truck; \$25,000 to continue to identify ocelot populations in Texas; \$25,000

for research in northern Mexico; \$10,000 to reward local ranchers who practice conservation and \$2,900 to purchase seeds of native trees to replant habitat.

Few of the impenetrable stands of brush that ocelots need for survival remain in the lower Rio Grande Valley, and scientists who have performed aerial surveys estimate that 90 to 95 percent of the native brush has been cleared, mostly for agricultural purposes. For that reason, the government is trying to convince ranchers not to clear the remaining brush and replant areas that have been plowed.

"We're attempting to recognize the individual, private land owners that are doing positive, constructive things for endangered species and native brush," Thompson said. "We'd like to press and give them some kind of small cash token to encourage them to do the good things they're doing."

The importance of the \$77,913 fine to the ocelot recovery program cannot be overstated: It is the largest contribution the Kleberg Institute has received. "It will help us continue, for at least another year, both the ocelot survey and the ecological study of ocelots and jaguarundi in Mexico and South Texas," Tewes said.

There is no research money in the Fish and Wildlife Service budget for the ocelot project, aside from money to survey the resident population on the refuge. Managers of the Atascosa Refuge have nevertheless conducted a good deal of basic research through the work of their biologist, Linda Laack, and by allowing scientists from the Kleberg Institute to work in the refuge.

"The Fish and Wildlife Service has been supporting our work since 1981 by allowing us onto the refuge, allowing us to use their vehicles and giving us housing support and with grants", Tewes said.

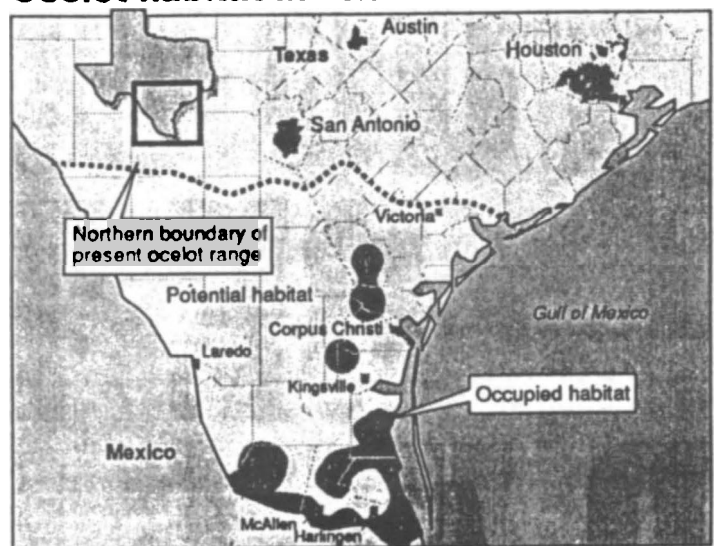
The Mexican component of the Kleberg Institute's research also has been supported by the University of Tamaulipas and a Mexican association of hunting outfitters.

World Wildlife Fund spokeswoman Dana West said the fund used Hamper's court-ordered contribution to expand the world's only jaguar preserve, Cockscomb Basin Reserve, in the rain forests of Belize. In November, the preserve was expanded from 3,700 to 100,000 acres by the government of Belize, West said.

James Pinkerton, Houston Chronicle Sunday, January 26, 1992.

contributed by Jean Hamil

Ocelot habitat in Texas



Marc Schneider / Chronicle

In Memory of Darth

Mark Lyon and I drove down to Noahs Ark petting zoo in Cave Junction, Oregon on Halloween day, 1989. Our purpose for this trip was to see three baby cougars, one of which we would purchase for Mark. As I was bewitched, we headed home with two males, three months old. They were christened Darth and Vader.

Darth became Mark's constant companion and the most popular member of his family. Shasta, Mark's wolf-malamute hybrid, became Darth's mentor. She helped teach him all the rules of etiquette every good cougar needs to know.

As he grew, Darth became an ambassador for all wild cats. He visited grade schools, nursing homes, and a variety of business establishments. One memorable visit was to a nursing home where an elderly lady was bedridden and had not spoken or responded to communications from those around her. Darth put his head on her bed, and nuzzled her hand. She petted him, smiled, and spoke to him; her first words in many months. Shortly after Darth left, this lady passed away quietly with a smile still on her face.

At 1-1/2 years of age, Darth chewed and swallowed his favorite toy. That same day, Mark took him to his regular veterinarian, who examined him, but could find no obvious problem. The veterinarian felt that Darth would pass the pieces of hard rubber he had ingested.

The next day, Mark was forced to leave town on business for two weeks, leaving Darth in the care of his mother. On the third day she realized that Darth was not acting quite right, even though he did not appear to be seriously ill, and called me for assistance.

I rushed over armed with Metamucil, a syringe (in order to force it down his throat if necessary), and most importantly my brave assistant, Sharon Roe, who was eventually to help me drag him out of his den, carry him up the steep, narrow stairs out of his daylight basement home, and lift him into the back of my car.

We did not know what to expect when we arrived at 10:30 PM, that Friday night. Mark had been the only person who had handled Darth in his life, and we were somewhat apprehensive about crawling into his den with him. If it had been any other cougar, we may not be here to tell this story. But Darth, being Darth, crawled to me across his den on his belly, put his head against my chest, and purred, and purred. The thing that worried us most at this point, was the glassy look to his eyes, and the fact that he was not responding as he normally would. I coaxed him from his den, and we noticed he couldn't keep his balance as his hind end wobbled from side to side. He immediately retreated to the comfort of his den and collapsed.

He let me feel his abdomen and winced when I pressed a tender spot. I thought I felt what could be a blockage but couldn't be sure. I left Darth in Sharon's hands, confident that even a total stranger could handle him. I called Darth's vet. Unable to reach him, I called The Sunnyside Veterinary Clinic, which has a 24 hour emergency answering service. Dr. Christensen called us back immediately, and did not hesitate to offer to see him that night, even though we had never previously visited their office.

Within the hour, Darth was at the clinic, and sedated so the doctor could better examine him. We showed him a large chunk of rubber that Darth had thrown up earlier that day. Dr. Christensen determined that he most likely had an intestinal blockage, and gave us two options.

One option was to x-ray him and give him enemas, but he felt strongly that the rubber may not show up on the x-ray, and that the enemas would not be effective because of the relaxing effect of the sedation on the intestinal muscle response.

The other option was to do an exploratory surgery to visually assess the condition of the colon. We agreed on this option, because Darth had not eaten for two days, and was becoming dehydrated. He had dropped from 126 lbs. to 97 lbs. At this point, Dr. Christensen felt that Darth was not severely compromised, but gave him fluids before surgery to insure a better chance of recovery.

Because of the short notice and time of night, the doctor advised us that there was no vet-tech available, and asked us if we could handle being his surgical assistants. Neither of us had ever been present during a surgery, and not knowing what to expect, we nervously agreed to help.

The 1-1/2 hour surgery went smoothly as the doctor removed many irregular chunks of rubber from Darth's stomach, small intestine, and colon. He disconnected Darth from the respirator, and we gently lifted him onto the floor where he was to recover. As I was on the phone to Mark, in Boise, telling him the good news, Sharon noticed that Darth had stopped breathing. The doctor was right there and immediately reconnected the respirator, monitors, and gave him injections to counteract the anesthesia. We spent the next 1/2 hour giving Darth CPR, and doing everything we could think of. We yelled at him in hopes that he could hear, we shook him and rubbed him, we hoped and prayed, but we could not bring him back.

Dr. Christensen was obviously shaken over the loss of such a magnificent cat, and comforted us the best he was able. For the next three days, he pondered every possible scenario, and after consultation with the other two veterinarians at the clinic,

concluded that there was nothing he could have done differently to change the outcome. He felt that Darth was more severely compromised than we had realized, due to the amount of time which had passed since he had first eaten the toy. He also thought that chemicals may have leached out of the rubber and into Darth's system, causing an undesired affect on the anesthesia or drugs administered.

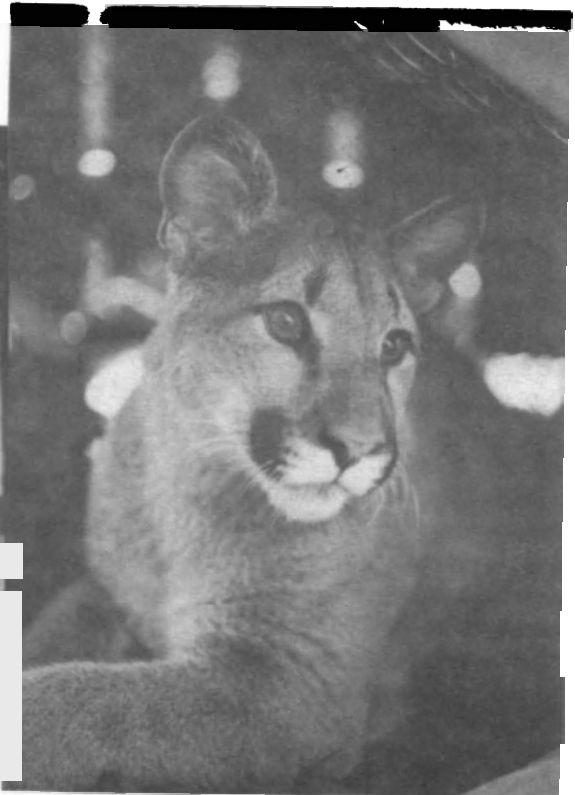
Mark drove home from Boise at 3:00 AM, arriving at 9:30 AM Saturday, having had no sleep all night. The reality of the situation hit him when he looked out the window into the backyard, which had been Darth's playground. At that point, he realized that his friend was really gone.

Mark brushed Darth one last time, wrapped him in his favorite sheepskin coat, and buried him underneath his log den.

Mark remembers Darth for the impact he had on everyone who encountered him, for his ability to draw people to him, make them smile, and leave them knowing that a cougar can be more than a ferocious wild animal. A cougar can be a gentle, loving, affectionate friend.

Darth was someone special, who will always be remembered in our hearts.

Shirley Malar and Sharon Roe





Small Animal Clinical Nutrition III

Authors: Lon D. Lewis, DVM, Ph.D., Mark L. Morris, Jr., DVM, Ph.D., and Michael S. Hand, DVM, Ph.D., Mark Morris Associates, with Chapters by Francis A. Kallfelz, DVM, Ph.D., Cornell; James N. Ross, DVM, Ph.D., Tufts.

To order, send \$18.00 check to Technology Center, P.O. Box 1493, Topeka, KS 66601

Many other aspects of medicine, in addition to diet, are necessary for proper disease management. This book covers diagnosis, and both dietary and medical management. This is what makes it a clinical nutrition text, rather than a nutrition text. Discussions revolve not around nutrients, but instead around disease prevention and management with emphasis on nutrition.

This 470-page textbook contains over 1,400 references, one-fourth published since the previous edition in 1984. The last 9 chapters cover incidence, causes, pathophysiology, clinical signs, diagnosis, treatment and prevention including both nutritional and medical management of diseases in which nutrition plays an important role in their etiology or management.

Topics discussed are: Nutrients: their characteristics, functions, utilization, amounts required and harmful, and occurrence and effects of excesses and deficiencies of water, calories, carbohydrates, fiber, protein, amino acids, fats, fatty acids, minerals and vitamins.

Other chapters are Pet foods: Feeding and Care of Dogs and Cats; Anorexia, Inanition and Critical Care Nutrition; Obesity; Gastrointestinal, Pancreatic and Hepatic Diseases; Renal Failure; Feline Urologic Syndrome (FUS); Heart Failure; Skeletal and Neuromuscular Diseases. Also included is an Index of Dietary Management of over 40 clinical conditions,

Appendix Table 1. Diet Types categorized according to their nutritional characteristics including: hypoallergenic; low calorie, protein, fat, carbohydrate, fiber, sodium, minerals, copper, or urate precursor diets; high protein, fat, calorie, fiber diets; meat, soy, lactose, gluten, or additive free diets.

Appendix Table 2 Prepared Dietary Foods.

Appendix Table 3 Homemade Dietary Foods

Appendix Table 4 Human Foods, nutrient content of those used to make homemade diets and occasionally fed to dogs and cats.

This book is a MUST for any feline reference library. It replaces my former favorite veterinary book, The Cornell Book of Cats. Written by veterinarians, for veterinarians, it is nonetheless understandable to the layman. An excellent value at \$18.00.

Several Outstanding Convention Speakers Announced

Using a different format which allows a number of featured speakers -and drawing on the many greatly knowledgeable resources in Texas, Convention '92 preparation is coming along well. Are you preparing? Remember to make your reservations at the hotel as soon as possible and to send in your fee before April 30. Contact your friends and encourage them to attend this fun and fact-filled meeting. If you plan to share a room with one or two others, you can save quite a bit on expenses. And don't forget what a grand town San Antonio is to visit; we'll be situated right on the famous Riverwalk and the new RiverCenter with time set aside for exploring and shopping.

Featured speakers who have committed to present to us include:

- The famed Director of the Texas wild ocelot project out of Texas A&I University and a regular recipient of LIOC ESCF donations, **Mike Tewes**.
- One of the most knowledgeable and absolutely best equipped diagnostic veterinarians in the country for exotics, **Dr. Steve Garner** of Safari Animal Care Centers and Advisor to ExotiCare, Inc.
- From **Fossil Rim**, the first private facility to achieve AAZPA qualification, participant in numerous SSP's and the facility that has successfully produced several dozen cheetah cubs (having held the world's record for successful breeding until 1990), a representative not yet firmly designated will speak to us.

That's not all! We expect to reach agreement with one -possibly two- more featured speakers, and are seeking LIOC ESCF members who are interested in providing information on a topic of their own interest or expertise for the general presentation slots.

Although we mentioned last time that the hotel has agreed to conditions for cats under 25 lb, we are still working with the city to see if we can get a plan approved. San Antonio, like many other parts of Texas, has a number of breeders close by and has had several incidents with illegally owned, problem, or city-living big cats recently, causing a not-real-positive attitude toward asking for more cats visiting the city. But we're doing our best.

Don't miss this chance to spend a couple of days learning about the cats and meeting new contacts and enjoying San Antonio. Make your reservations now.

Convention '92 Fast Facts

When: August 13-16

Where: The Historic Crockett Hotel on the Alamo, San Antonio, Texas

Room Cost

\$75 per night, 1-3 persons
 Make your own reservations at 800-292-1050.
 State that you are with the LIOC ESCF Convention to get the special rate and be in our block.
 Reserve before July 16 to guarantee a room.

Convention Cost

\$90 before April 30
 \$100 after April 30
 \$110 non-members, includes membership
 Make checks to LIOC ESCF Convention 92.
 Mail to Route 3, 410 Mattes, Alvin, TX 77511

Schedule of Events

Thursday evening

Check in / Fajitas and Margaritas with Cash Bar

Friday

Continental Breakfast

Speakers

General Membership Meeting

Friday evening:

Special Event -to be announced (optional)

Saturday morning

On your own on the Riverwalk, Alamo, RiverCenter, or El Mercado.

Saturday afternoon

Featured Speakers

Saturday evening

Banquet, Awards, and Auction

Sunday

Farewell Breakfast

San Antonio Zoo *or* Seaworld of Texas (optional)

Beginnings

Domestic cats are, taxonomically speaking, members of the Felidae. That is, they are one of about 35 living species linked by characteristics such as their blunt-faced skulls, their massive masseter muscles which power a crushing bite, their cheek teeth adapted to slicing flesh and their tongues armed with sharp papillae to rasp flesh from bone. Together, the four genera of living cats comprise the only family of Carnivores on Earth whose members are unanimously and completely carnivorous.

The 28 species of small cat, (all members of the genus *Felis*) are sufficiently similar to all be immediately recognisable as 'cats'. Their canines are impressively long and sharp and function like daggers, being stabbed into the neck of prey. In the case of small felids, they are so configured exactly to prise apart the vertebrae and sever the spinal cord of a mouse. The teeth almost feel their way to the killing spot. Indeed, these canine teeth are well supplied with basal nerves and this, combined with the very rapid testing bites, enable the teeth to choose the correct path at lightning speed; they avoid the vertebrae and wedge in the gap between them, forcing them apart and snapping the spinal cord.

The first records of domestic cats come from the ancient village of Dier el Medina, near Luxor in Egypt. The village, dating to 1500BC, was populated by the artisans who fashioned the magnificent royal tombs nearby. In their own tombs, 3,500 years ago, they painted domestic scenes; the seated wife and, beneath her chair, the domestic cat, a symbol of pleasure and fertility. But what was the first domestic cat? Its closest relative is one or other of the very similar species of European and African wildcats. Until recently the prevailing practice was to separate the racily built African wildcat *Felis lybica*, from the stockier European wildcat *Felis sylvestris*, and to nominate the former as ancestor to the domestic cat *Felis catus*. Others, impressed by the great similarities of African and European wildcats, concluded that they differed only as subspecies. Most recently, all three have been lumped together, with the domestic cat relegated to subspecific status within the European wild species. In these terms, that which snoozes in front of your hearth is a *Felis sylvestris catus* - a domesticated subspecies of the wildcat.

Although the consensus is that the first domesticated cats were the African wildcat, the ancient Egyptians also mummified another species, the jungle cat, known to science as *Felis chaus*. There is evidence that in a temple built by Queen Hatshepsut around 1470BC, the priests kept jungle cats. Further, in the tomb of Beni Hassan, a painting dated to 2000BC perfectly portrays this species. The jungle cat is rumoured to have a more placid temperament than the African wildcat and this, along with the archaeological evidence, has led Roger Tabor, presenter of the Cats series, to suggest that it, too, has contributed to the domestic cat's ancestry.

With thousands of mummified cats around, one might jump to the conclusion that scientists would have a perfect record of the domestic cat's pedigree. Sadly, through an appalling error, this is not so. Familiarity bred contempt, and at the end of the nineteenth century

the cat mummies were largely dismissed as uninteresting. In 1889, for example, 19 tons of them were shipped to Liverpool and sold as fertilizer. Perhaps modern molecular techniques, which have the power to look into the genes locked in the remains even of long dead sabre tooth cats, will confirm whether jungle-cat blood fertilizes the roots of domestic cats.

Either way, an intriguing question is whether the wild ancestor would have behaved the same way as modern domestic cats if confronted by the same circumstances. In an attempt to answer this I set up a radio-tracking study of the African wildcat in Saudi Arabia. We found that, like Scottish Wildcats, they generally travelled alone. These Saudi cats had access to human refuse around which feral domestic cats congregated in colonies. Perhaps the capacity for such togetherness has indeed been fostered by domestication.

The initial transition from forest to fireside probably occurred in Egypt, on the grounds that it is there that cats first appear in paintings. There, they were deified in the form of the cat-headed goddess Bast (Also known as Pasht, a word which those with an ear for etymology believe to be the precursor of 'puss') Bast was worshipped, and cats revered, until 390AD, when she was made illegal by the Roman legislators. This, however, did not discourage other Romans from carrying cats to every corner of their Empire and, thereafter, European colonists dispersed them around the world - a history which can now be read in the distribution of different coat-colours in different places.

Reprinted from BBC Wildlife November 1991
contributed by Patrick Kelly

Pictured on next page, top to bottom, left to right:

TL: Al Porges with snow leopard Verushka. She has begun cycling again this winter, and Al has high hopes of babies by spring.

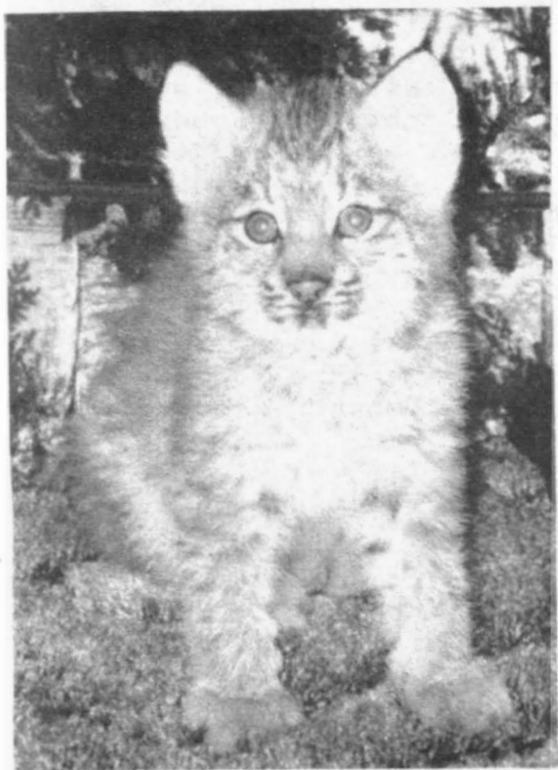
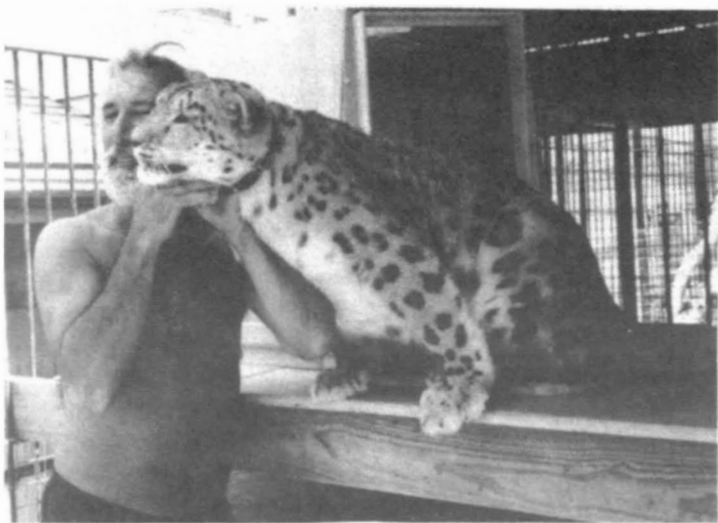
TR: Clouded leopard, Butch, born September 18, 1985, was donated to Donna Amos of Roseburg, Oregon, by Penny Andrews. Butch's mate died and he has never proven to be a breeder. Butch was originally owned by LIOC member William Boyle, who passed away in 1987.

ML: Majestic, a young Canadian Lynx lives with Canadian member, Russel Hanson.

MR: This beautiful pair of leopard cats owned by Wolf and Chris Klose, reside at their Jungle Cat World, in Ontario, Canada.

BL: Robert Merkel has acquired a young caracal lynx. Pasja enjoys the company of Gretchen, the himalayan cat.

BR: Jean Hamil's Runte' bobcat, pictured here at age 4 months. Jean reports he has really filled out, and he thoroughly enjoys the creature comforts of domestic life.



State Laws On Private Ownership

The following information is provided to serve only for comparison purposes, and is a brief summary of state laws governing private ownership of wild felines. Members are urged to contact their state Wildlife Departments individually, to acquire their own copies of their state's latest laws. Further, since many Game and Fish Departments do not regulate the possession of "exotic" species, you should investigate the state laws, as exotics may be covered in state legislature under the heading of "Dangerous Wild Animals" or "Injurious Animals" or even Health Code laws. You should always write both the state government as well as your state Wildlife Department to get all the facts. LIOC recently requested updated 1992 wildlife laws from all 50 state wildlife agencies. We will publish more state laws in the next issue of the newsletter, as we have room.

North Carolina - State Resources Dept. regulates only native species. Persons must first obtain a license. Licenses will not be issued merely for "pet" purposes. Captivity licenses for cougar may be issued to a bona fide publicly supported zoo, or an educational or scientific research institute. For these purposes, cougar can be kept in caging. For an individual to possess a cougar, he must submit a plan to hold cougar *without* caging. The facility must include at least 1 acre of land, simulating a natural environment, enclosing trees, shrubs, a pool, shade, privacy, and enclosed by a 12 foot tall fence, burried 3 feet deep, with a four foot overhang. Further, a secure cage, with concrete floor, roof and den house are required. Bobcats require a 50 square foot cage.

Illinois - Most cats are considered Dangerous Animals and possession is restricted to certain types of institutions. Permits for the possession, propagation, sale of wildlife are required. Lion, tiger, leopard, ocelot, cheetah, margay, mountain lion, bobcat jaguarundi all require authorization from Illinoise Dept. of Agriculture for possession of dangerous animals.

Maryland - Section 70-D prohibits the importation, transportation, sale, offer for sale, trade, etc., any member of the cat family, other than the domestic cat, as a pet. A permit could be obtained from the Department of Natural Resources only if the applicant is a federally licensed exhibitor, such as a zoo or circus.

Delaware - The Delaware Division of Fish and Wildlife does not regulate wild felines. They do prohibit the possession of all felines listed as endangered by the U.S. Fish and Wildlife Service as well as specifically the following: leopard, snow leopard, clouded leopard, tiger, and cheetah. Exotics are regulated under the state Dept. of Agriculture.

Kentucky - Persons wishing to buy, sell, possess, propagate or exhibit any wildlife must first obtain a Commercial or Noncommercial Pet and Propagation Permit. Permits must be acquired within ten days of legally obtaining wildlife and must be renewed annually. Application forms ask source of supply, uses, proof that animal was obtained legally, and guidelines on confining facilities must be met.

Alaska - All possession, trade, importation, exportation, trade, etc., is illegal without a permit. Scientific or education permits only are issued to those who can demonstrate a significant benefit to the state. A fur farming permit for indigenous furbearers may be issued.

Alabama - Cougar caging requires a minimum of a 5 foot by 15 foot chain link pen, with 8 foot high walls, set on concrete, and surrounded by another 8 foot tall chain link fence and top, 3 feet away.

Massachusetts - Possession of all wild felid species is restricted. Only zoos, or a person holding a class 4 propagators permit may possess these animals. The review of these permits is quite rigorous and for endangered species includes the review of a long-term breeding plan.

New York - Possession or sale of leopards, snow leopards, tiger, cheetah, Asiatic Lions, Mountain lions, margay, ocelots or jaguar is forbidden, under Environmental Conservation laws, without permission granted by the commissioner, in the form of a permit. Permits will only be issued for scientific, educational or zoological purposes. Fish and Wildlife regulations forbid the possession, sale, trade, transport, import, etc. of any and all subspecies of lion in New York, without a valid permit. These permits are issued only for scientific, educational or exhibitory purposes.

Kansas - Possession permits required for cougar. Applicant is required to provide, name, address, phone number, species desired, purpose, proof of purchase, and any other information requested. Caging requirements are provided as well as operational procedures and husbandry and health standards. Exotic wildlife may be legally imported, possessed, sold, provided wildlife was legally raised or captured. Exotic wildlife may be possessed without limit in time and number, but must be controlled at all times.

New Mexico - Permits and licenses may be issued only by the Director of the Department of Game and Fish for importation, possession, propagation, sale, exchange, rehabilitation or zoo. They also state that it shall be illegal to import any furbearer, or retain it live in captivity without written permission from the Director.

Utah - All species of Felidae except captive-raised bobcats and lynx used for commercial captive fur farming are prohibited from being imported into Utah. In the case of zoos, circuses, scientific research, or programs of general public benefit, felidae can be imported or possessed, provided authorization is obtained through a certificate of registration.

Colorado - The only license issued to hold wildlife mammals in private possession is the Commercial Wildlife Parks license. Felidae caging requires a minimum cage height of 8 feet with top, or 10 feet with canteliver with 2 livestock-type electrified wires. Walls shall extend three feet below ground, or three feet inside on the surface. Wildlife may not be held as pets - commercial use must be shown.

Pennsylvania - Permits are granted for menageries, educational,

or scientific purposes. Exotic wildlife may be purchased, possessed, or held, provided it is legally obtained, and prior permission is granted by the Commission through issuance of a permit. Permits will not be granted until the Commission is satisfied that the shelter, care and protection of exotic animals has been met. Rules concerning safety, housing, sanitation, traveling, acquisition and disposition are provided.

North Dakota - Individuals or groups maintaining furbearers (cougar, bobcat, lynx) as pets, or breeding stock must obtain a permit to propagate and domesticate from the North Dakota Game and Fish Department. Importation of these animals requires a valid health certificate and importation permit. Applications require name, address, description of premises where applicant will keep animal, number and kind desired, and any other information the commissioner may require.

Oregon - there is no laws preventing the legal purchase of wildlife from individuals in or out of state that is legally held on a permit. It is illegal to capture most wildlife from the wild.

Arkansas - Breeding and selling bobcats requires a Furbearer's license. Captive born cougars are not regulated, nor are exotic felines.

Arizona - Private possession of all Felidae, with the exception of the domestic cat, is restricted under Arizona regulations. Licenses for holding such animals are very rare in Arizona, and are not generally considered to be desirable by the Arizona Game and Fish Commission. Wildlife holding for the purpose of science or education, zoo and rehabilitation licenses do exist.

Louisiana - Bobcat possession requires a nongame quadruped Breeder's/Exhibitor's License. Due to the potential for cougar to inflict harm on owners or innocent bystanders, licenses will no longer be issued for this feline. Current holders of licenses can keep their animal til it dies. Exotic felines are regulated by the State Dept. of Agriculture.

Oklahoma - Commerical and non-commercial wildlife breeders licenses are issued. Caging must be completed, and facility inspected by a wildlife officer, prior to granting a permit. Application requires name, address, phone, location of animal enclosure, proof of legal purchase, health inspection, notification of local police authorities.

Missouri - possession of all captive wildlife requires a Wildlife Breeder Permit, to be renewed annually. Prior to obtaining wildlife, caging must be completed, inspected and approved by Missouri Conservation officer. Non-breeding wildlife is allowed, though there isn't a specific "pet" category. Confinement standards are provided, but seem to address only native species; cougar, bobcat, lynx. Cougar can be legally held in a 100 square foot cage. (Pretty sad)

South Dakota - At the present time, no rules govern possession, propagation or sales of wild felines, except that those in possession of such felines must be able to prove legal private ownership.

Minutes Of Past Year's Board Meetings

March 1, 1991 Quarterly Board Meeting and April 30, Voting Results

Life Director, Ken Hatfield verbally resigns to John Perry. A written conformation is requested but not received.

Extention of the membership of those members involved in Desert Storm by 1 year - motion approved unanimously

Dues Increase: Culver, Wilton, Hauser, Wagner - no increase. Perry, Mustacio \$2.00 increase, Knight-Monteiro, Porges \$5.00 increase

To limit the membership on the executive board to one member from a family unit - Porges, Wagner, Hauser, Mustacio - approve, Culver, Wilton, Perry, Knight-Monteiro - disapprove motion not approved.

Just \$1500 of the LIOC treasury and none of the LIOC books and records have been transfered to the current treasurer, Lynn Culver.

Life Directors, Shirley, Ethel and John are assigned to expedite the transfer of LIOC funds.

August 9, 10, 1991 Convention Meeting

Treasurer announces a transfer check of \$5,000 from the former LIOC treasurer, was received in May. See Sept/Oct newsletter for complete Board of Directors and General Membership report.

November 20, 1991 Quarterly Meeting

Shirley has enclosed for board approval a legal flyer on USDA and USDI laws to be used to answer member inquiries.

Katie has updated the LIOC phamplet which is sent out to persons inquiring about LIOC. The LIOC phamplet currently used to answer inquiries is poorly copied, with some outdated information. Board members are asked to suggest any further changes, or approve as is.

Katie has created a questionnaire to be sent out to non-renewing members. Board is asked to amend or approve this questionnaire.

A letter to the editor written by Fred Boyajian, was received by the editor and all board members. Due to its length and abrasive writing style, Shirley polled most officers and a decision was made to reject the letter for publication in the newsletter. Shirley wrote Fred and asked him to rewrite his letter, making it briefer and more issue oriented. Fred declined her offer. Board members provided comments on a letter written by president John Perry, which responded to Fred.

Vice President, Suzi Mustacio has mailed in her resignation.

In September, the treasurer receives a final transfer check of \$2,246.86 from Connie Hatfield.

Lynn has proposed that the name of LIOC Endangered Species Conservation Federation be changed to include some reference to felids.

Barbara Wilton has moved that Ken Hatfield be reinstated as a Life Director.

December 5, 1991 Life Director Issue and Motions

Katie has raised a point of order over whether a valid resignation of Life Director, Ken Hatfield, has occurred, or whether it can be rescinded, if requested. The Life Director election is delayed until this issue is resolved.

Ken Hatfield has mailed the board a letter dated December 5th, 1991, providing his written resignation effective March 1, 1991.

January 3, 1992 Results of Voting from December 5, 1991 Ballot

As moved by Shirley Wagner -
Motion to Extend Life Director Nominations Until December 18.
Porges, Culver, Wagner, Wilton, Perry - approve, Hauser - abstain

As moved by Shirley Wagner -
Motion to accept all resignations received in 1991.
Porges, Hauser, Wilton, Perry, Culver, Wagner - approve

John proposes adding the following to Section 7.8 of the By-Laws:
7.8 Any member of the Executive Board who chooses to resign his or her position shall do so to the President or to the Secretary. Receipt, in writing, shall constitute acceptance of the resignation. In the case of a verbal resignation, the President shall, within two weeks of notification, request written clarification. In the absence of written response by the resignee within one month, the person shall be deemed to have resigned and the position vacant. Porges, Culver, Wagner, Wilton, Perry - approve, Hauser - disapprove By-law is approved by a vote of 5 to 1

John suggests to clarify section 1.1, add the word "term"

1.1 All officers and ~~term~~ directors are elected at the same time and serve concurrently. each officer and ~~term~~ director serves for two (2) years beginning on January 1st of the year following election. Porges, Hauser, Wilton, Perry, Culver, Wagner - approve By-law passes

John suggests to add to section 1.2 the following:

1.2 To promote wide participation, the Executive Board should ensure that, if a Life Director chooses to run for another office, at least one additional person shall be nominated for that position. Porges, Culver, Wilton, Perry - approve Hauser, Wagner - disapprove Addition to By-law is approved by a vote of 4 to 2

February 25, 1992 Quarterly Board Meeting

Proposed by Ethel Hauser: modify Section 7.8

1. To strike "In the case of a verbal resignation, the President shall, within two weeks of notification, request written clarification. In the absence of written response by the resignee within one month, the person shall be deemed to have resigned and the position vacant" from section 7.8 of the By-laws Porges, Hauser, Wilton, - approve Wagner, Perry, Knight-Monteiro - disapprove Culver - amend to six weeks and board should be notified of letter's content, and it should be sent by certified mail.

Issues concerning inactive Life Directors was discussed and motions were made and voted on. Lacking any clear majority on these motions, the issue was tabled for further discussion at convention.

CALL FOR AGENDA ITEMS - It won't be long before August, and we all know what that means - Convention '92! LIOC is definitely in a growth period. There are many issues facing the future of captive husbandry and many directions LIOC could pursue. NOW is the time to send in your thoughts for any action items, and future directions for LIOC Endangered Species Conservation Federation Board of Directors and the general membership to consider. Send your thoughts & agenda items to: LIOC secretary, Lynn Culver, Rt. 6 Box BC 56A, Mena, Arkansas 71953.



**Pacific Northwest Exotics
February 24, 1992 Meeting**

Our first meeting of the year was hosted by Jerry Boyle. We had attendance of 35 members and 15 guests. Darryl and Melanie Scheel brought their male bobcat, Bachu (7 months), Sandy Hammersley brought bobcat, Coda (7 months), John VanStry brought his young female South American cougar, and of course, Jerry's bobcats and lynx were in attendance.



Jerry Boyle announced:

- The upcoming L.I.O.C. convention is to be held in San Antonio, TX. August 13 -16th
- He knows of a ten month old Bengal cat for sale
- Discussed the canned hunt issue reported recently in a national magazine

Sharon Roe announced the following:

- Dixie Fitzgerald has a pair of year old Geoffroy cats, who need a loving home, where they can grow up indoors. Unfortunately, Dixie's grandson is allergic to cats, so she must move all her cats outdoors, and can't quite bring herself to move her Geoffroys into the country.
- Brought to our attention the article which Pat Hoctor printed in the February issue of Animal Finder's Guide, "Captive-Bred Wildlife Regulations." She distributed copies to all members present. A response to the proposed changes to the existing regulations must be received by the U.S. Fish and Wildlife Service on or before 3-9-92.
- The National Wildlife Federation's 56th Annual Endangered Species Seminar will be held in Portland, Oregon March 19-22nd.
- A suggestion to plan a trip this year to Northwest Trek Wildlife Park, located near Chehalls, WA.

Problems discussed were:

- Round worms. How to identify and eradicate. One member's cat has had a problem with this parasite re-appearing frequently. Several people suggested that dosage of medication was insufficient, and possibly not frequent enough.
- How to re-socialize a young bobcat after a traumatic experience at the veterinarian's. It was suggested to expose the cat to more people, but not to force contact.

In memory of a special cougar who had visited several of our meetings, a letter was read which will appear in a upcoming L.I.O.C. newsletter.

The last order of business was the announcement of the results of the election of officers for 1992. (Drum roll. . .)
 President - Jerry Boyle, Vice President - Sharon Roe,
 Secretary/Treasurer - Connie Miller

The usual dollar game and raffle were held. Meeting adjourned.
 Respectfully submitted,
 Connie Miller, secretary/treasurer

LIOC Newsletter Back Issues For Sale

Now you can order back issues of the LIOC Endangered Species Conservation Newsletter for only \$2.75 each. (includes postage)

We have over-runs of recent newsletters, and we thought newer members would enjoy reading them, so we are offering them for sale.

Issues Available now:

September/October 1986: Candidates, Advertising Pro/Con, Convention '86, Infectious Diseases of Nondomestic Cats, Antibiotic Abuse, Pet Jaguar Stirrs Dispute

March/April 1987: Cats of the World: Serval, Hematological Values, U.S. Jaguarundi Population Confirmed, Legislation, Cougar Hunt Protested

March/April 1990: An Ounce of Prevention, Snow Leopard Symposium, Blood Study Offered, Tiger Life, Panther Recovery, Texas Legislation, Leaping for their Lunch, Hazards for Reintroduced Lynx

May/June 1990: Rememberances of Rocky, Florida Wildlife Rule Changes, Chapparal Bulletin, Cat anatomy, Catfishing, Member Spotlight: Lance Dickman, The Hetrick Zoo

July/August 1990: Members Save Abused Cougar, Caesar Kleberg Update, Farewell to Sherre Khan, LIOC Spotlight-Justin Tanner, Panther Recovery

September/October 1990: Focal Palatine Erosion, LIOC Spotlight-Beejay Lester, Translocation Success, Biology & Ecology of the Caracal in Israel, The Making of Chandar

November/December 1990: Guest Editorial: Private Ownership, Improving Feeding of Captive Felines, Cats in Print, Confiscated Cougars

March/April 1991: Cardiomyopathy in a Cougar, Chlorhexidene Treatment of Ringworm, For the Good of the Species, Cancer Care, Commentary: Indians, Lions & Idiots, Belize Jaguar Sanctuary

May/June 1991: Amur Leopards, Teegee & Me, Private Ownership Under Attack, Lynx Reintroduction, Smithsonian Seminar

July/August 1991: Servals of Gorigor, Vaccinations in Animals, Designing Meat Diets, Canned Hunts, Commentary: Canned Hunts, Jaguarundi Caught

September/October 1991: Convention '91 Report, Photo Collage, Cats in Nepal, White Tiger Debate, Book Review

To order back issues, write the LIOC secretary, Lynn Culver, at Route 6 Box BC56A, Mena, Arkansas, 71953. Request back issues according to the newsletter date, and include a check made out to LIOC for \$2.75 for each newsletter ordered.

Food For Thought

Today's world is one of restrictions in personal freedom and expanding roles for technology. Animals are facing extinction at alarming rates, yet private propagation is stifled by government red tape. States have been moving to tighten up ownership of exotics and limit it exclusively to the professional, whether institution or private. The days of wild feline ownership as a hobby are numbered.

Being professional to many state governments means affiliated with AAZPA, or participating in an SSP program. There is a great need for a universal feline pedigree registration system, as well as breeding advisory committees and general guidelines for propagation. For LIOC to play a strong role in such an effort, YOU the membership, as well as non-members, would have to recognize and use *en masse* the service we have offered all along - the LIOC registry service.

Before we can formulate policy - we need to know what you, the members think. There are issues being wrestled with by the AAZPA and the SSP coordinators - culling, subspecies purity, genetic diversity, long-term captive breeding programs, the proper role of wildlife in captivity and the proper way to house and exhibit these animals. We too, as private owners should be speaking among ourselves in an effort to spread knowledge, ideas, awareness and hopefully answer questions.

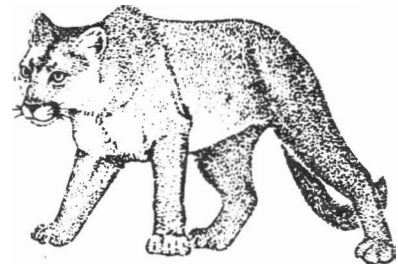
As populations of animals become isolated, they begin to experience inbreeding. If the population stays isolated long enough, it responds to its limited gene pool and the various environmental conditions it lives among, and becomes what scientists declare is a separate subspecies. The effects of inbreeding make it unique, but it also makes it vulnerable to extinction, because its limited genetic bank hinders its ability to adapt to a changing environment.

Conversely outcrossing of subspecies produces hybrid vigor. The genetic diversity of both parent subspecies' gene banks are available for the offspring to draw upon, and this increases the offspring's ability to adapt to a changing environment. One could say the subspecies hybrid offspring is *neither* of the parent subspecies, because it is mixed. Or one could look at the offspring and say it is *either* of the parent subspecies, because it is both.

Zoos and scientists are wrestling over this issue right now. It has enormous implications for captive husbandry and protection of populations in the wild. A famous example right now is the Florida Panther population. Genetic testing finally proved what some had been saying all along - the Florida panther, the highly inbred separate subspecies of American cougar, was actually a subspecies hybrid, because 7 South American cougars were released into the Everglades in the 60's. At first this was feared bad news - no more federal dollars to protect a "polluted" gene pool. Then scientists fell back on the fact that the pollution occurred *before* the Florida panther's Federal Endangered status, therefore, whatever it was, that's what was endangered. Funding assured, scientists went further to say that it was the genetic diversity infusion from the South American cougars that is a major reason the Florida panther is not in worse condition.

Subspecies purity supporters have gained a foothold in the scientific community. And often states bow to the recognized experts. That means that our stock - representing the hybrid vigor school of thought, is being declared worthless, useless and should be done away with. How do you as members of LIOC feel? What should our position as a club be? Do you believe that subspecies purity or genetic diversity in the captive population is more important? This is just one of many issues facing us today, and in this *Food For Thought* column, I would like to stimulate some of you to respond, with researched answers to these questions.

Please let us hear your thoughts on this subject, and we'll publish a few of the responses in the next LIOC newsletter.



First Mountain Lion Killed in Nebraska in 100 Years

November 17, 1991

Omaha, Neb. (AP) A mountain lion has been killed by a hunter in the Nebraska Panhandle, the first confirmed kill in the state in a century.

The cat just drifted out in front of me. 'The first thing I noticed was the 2 1/2 foot tail," said Lyle VonSpreckelsen of Clay Center, who killed the 80 pound female while deer hunting.

The mountain lion measured 5 1/2 to 6 feet from the tip of its nose to the end of its tail, he said Thursday. The Game and Parks Commission is studying the carcass to determine how old it was.

The last confirmed sighting of a mountain lion in Nebraska was about 20 years ago near Oxford, said Kirk Gustard, district supervisor for the U.S. Agriculture Department's animal damage control office in Lincoln,

But Panhandle residents have for years reported seeing mountain lions. Sunday's shooting is the first kill of a mountain lion in at least 100 years, said Ken Johnson of the state Game and Parks Commission,

Despite their rarity, the state Game and Parks Commission says mountain lions are still considered predatory animals in the state and it is legal to kill them.

VonSpreckelsen, 34, his wife, Peg and son Justin were hunting just outside Fort Robinson State Park in the state's northwestern corner on land owned by rancher Leonard Forbes. The rancher asked them to kill the cat if they saw it, VonSpreckelsen said.

Have You Met Melaleuca? If So, Are You Using Melaleuca?
If Not, Let Me Introduce You.

From Australia, "The Land Down Under," known for its hundreds of unique species of wildlife such as kangaroo, koala, platypus and the wombat, comes another "Wonder From Down Under" -- this time from the plant world. A shrub-like tree that grows in a limited area of New South Wales, Australia, yields a precious oil now documented to have definite therapeutic properties. The scientific name for this wonderful tree is "Melaleuca alternifolia" - therefore the term MELALEUCA OIL.

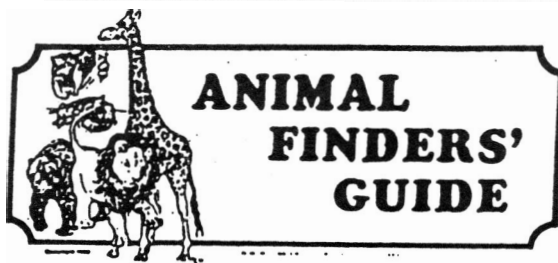
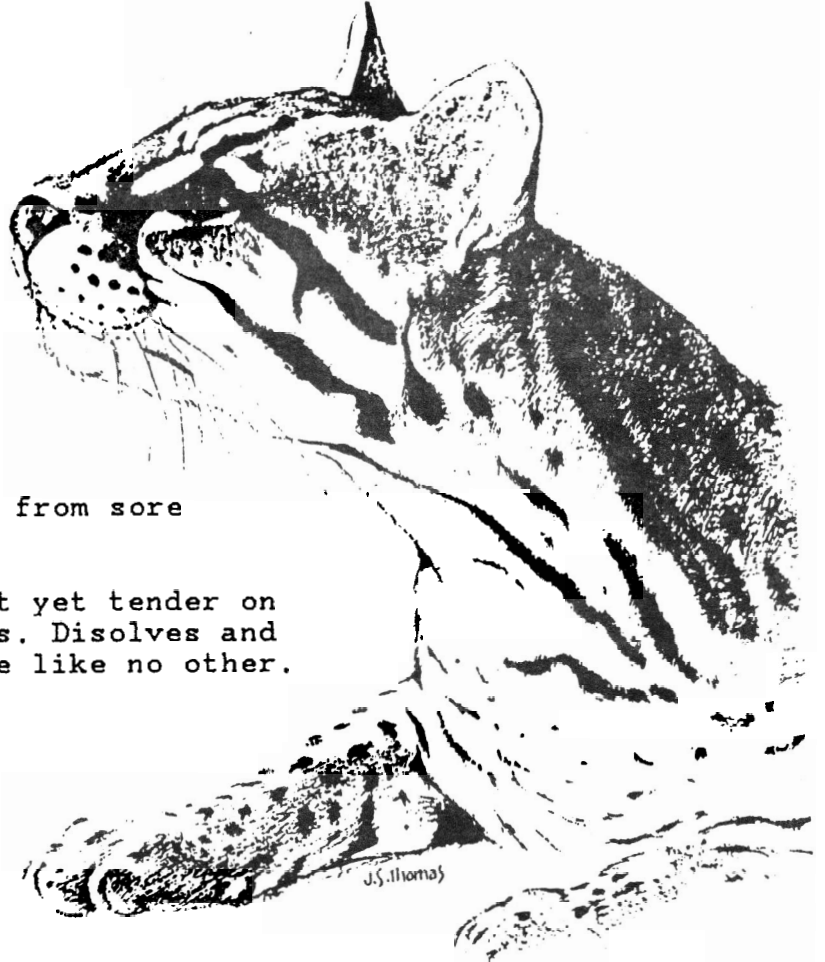
T36-C7 - This oil is totally natural and far exceeds the healing power of Aloe Vera. Soothing to minor cuts, burns, sunburn, scrapes, abrasions, insect bites, stings, cold sores and itching. Very effective in the treatment of various fungi such as athlete's foot and ringworm.

PAIN-A-TRATE - Hours of relief from sore muscles and arthritic pain.

TOUGH 'N TENDER - Tough on dirt yet tender on hands and all washable surfaces. Dissolves and lifts dirt, cuts through grease like no other.

SOL-U-MEL - Use in 5-1 solution with water as a spray or wash for pet and stale room odors, mold and mildew; as a spray or dip in treating pet wounds to prevent and reduce infection. Can be used with Tough 'N Tender, Mela Magic and Mela Drops anywhere bacteria might thrive. Discourages insects such as ticks and fleas.

For a complete list of products and uses, contact:
 BARBARA WILTON P.O. Box 66345 Portland, Oregon 97290



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

Friends of Animals Caucus

On 19 November 1991, the Congressional Friends of Animals (an informal, bipartisan, bicameral caucus) held a briefing on canned hunts. Participants at the briefing included: Roger Caras, President of ASPCA; Cleveland Amory, President of The Fund for Animals; Becky Robinson, Legislative Director of Friends of Animals, and Kris Vehrs on behalf of AAZPA. The purpose of the briefing was to inform members of Congress and their staff about canned hunts. Each of the participants stated their opposition to canned hunts.

Roger Caras suggested that all zoo-born young be registered and tracked (he says zoos should be able to tell where any individual animal is at any time through the use of transponders, etc.) and that no zoo should be allowed to sell animals to any place which may lead to shooting of the animals. Additionally, he suggested that because most zoos are supported by taxpayers who do not want to see animals go to hunting ranches, zoos that do not comply with these regulations should lose their tax-free status. Kris Vehrs stated that AAZPA does not condone the transfer of any animal to another owner for the purpose of a canned hunt.

The Performing Animal Welfare Society (Pat Derby's PAWS) prepared a written statement in which they introduced four legislative solutions to canned hunts. 1) Institute a tracking system that would trace the movement of every captive-held wild animal from birth to death; 2) restrict more narrowly the ownership of wild and exotic animals to make it impossible for hunting ranches to exist; 3) make it illegal to sponsor a 'canned hunt' or to transport, buy, sell, deliver, receive, breed, or possess exotic animals for the purpose of hunting; and 4) extend the prohibitions of the Animal Welfare Act and the Endangered Species Act to all interstate and intrastate commercial and noncommercial transactions.

Congressman Tom Lantos and Charlie Rose, the co-chairman of the Caucus, stated their support for federal legislation to outlaw canned hunts. It is likely that legislation will be developed during the next session of Congress.

AAZPA Communique, January 1992

Note: If you wish to give your support to legislation outlawing Canned Hunts, you may contact Congressman Lantos at: Room 1526, Longworth Building, Washington, D.C. 20515-0511 and Congressman Rose can be reached at 2230 Rayburn, Washington, D.C. 20515-3307

FINAL NOTICE The Membership/Breeder directory is about to be published. We have twice requested the membership participate by filling out and returning the enclosed questionnaire. So far, we have 140 responses, we would like most of you who haven't taken the time to respond, to dig it up, fill it out, and mail it back NOW.

Florida Branch Announces Annual Breeder's Award

The Florida Branch of LIOC (now inactive) announces the establishment of an annual breeders award. Each year, a member of LIOC who is currently breeding exotic felines will be presented with a cash award at the annual LIOC convention for the next 6 years.

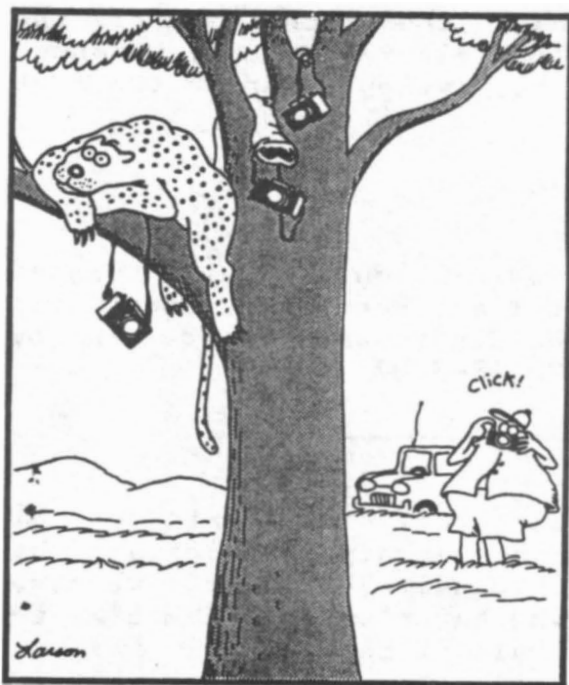
The name of this award is the Engler-Douglas Breeders Award in memory of two of Florida's members. Bill Engler, who contributed to the medical knowledge of the membership and advanced the cross-breeding of the leopard cats. Charles Douglas for his unselfish devotion to all his animals and success in breeding margays, ocelots and cougars. Both men gave of themselves to the exotic and the exotic owner. Without them, many of us would have never known the special love of having an exotic in our life. In keeping with the tradition they represent, Florida wishes to acknowledge the breeders that continue to be the life blood of LIOC Endangered Species Conservation Federation.

General members of LIOC can nominate candidates for this annual award by sending the name and reason for the nomination to:

Danny Treanor,
Engler-Douglas Award
1898 Twin Lake Drive
Winter Garden, Florida 34787.

The decision will be announced at the Annual Convention for the next 6 years. The award may not occur some years, depending on the number of nominations received. We appreciate all who participate.

THE FAR SIDE by Gary Larson



SNAFU



"Next time, tell me if the cat I have to get out of a tree has escaped from the zoo."

Did You Know...

5 to 30 million species inhabit the Earth, according to biologists

1.4 million species have been identified and named

4,000 species are mammals

250,000 known species are flowering plants

750,000 identified species are insects

1 percent of all animal species are larger than a bumblebee

50 to 90 percent of all species are thought to live in tropical forests

51 million acres of the world's tropical forest are lost annually

5,800 acres of tropical forest are destroyed each hour

25 percent of all Earth's species could be extinct by 2050

50 to 150 tropical species are thought to go extinct daily

617 plant and animal species are listed as endangered by the U.S. Fish and Wildlife Service as of December 1991

6 species have been removed from the endangered species list since 1973 due to their recovery

7 species have been removed from the list since 1973 because they went extinct

24 endangered or threatened plants have improving populations

97 endangered or threatened plants have declining populations

33 endangered or threatened animals have improving populations

122 listed animals have declining populations

from National Wildlife Federation Magazine April/May 1992

**A species will become
protected only after
it is hopelessly
depleted.**

Human's first law of extinction.



