



NEWSLETTER

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Long Island Ocelot Club
1454 Fleetwood Drive E.
Mobile, Alabama 36605

Volume 29, Number 6
November/December 1985

LONG ISLAND OCELOT CLUB



GLADYS LEWIS AND BORIS, LIOC member Gladys Lewis raised Boris, here 6 weeks of age and 22 pounds. Boris, the first white Siberian Tiger on record, was born at Robert Baudy's Rare Feline Breeding Center. Photo contributed by BeeJav Lester.



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PLEASE SEND ALL APPLICATIONS AND MEMBERSHIP RENEWALS DIRECTLY TO BARBARA FOR FAST SERVICE.

ALL NEWSLETTER RELATED MATERIAL SHOULD BE SENT TO THE EDITOR, SHIRLEY TREANOR

Help Wanted

REPORTERS

LIOC urgently needs material for its newsletter publication. We can only share those experiences, funny, happy, sad or tragic, which are sent to us. This sharing is a part of the enjoyment of exotic ownership

WRITING EXPERIENCE: None whatsoever

PREREQUISITES: Love of exotic cats

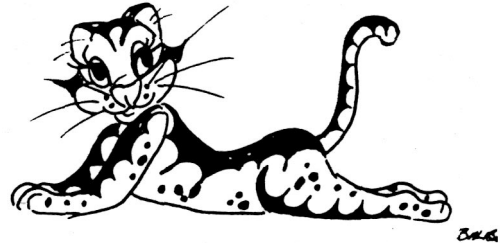
TYPE OF MATERIAL: Articles of happy and sad experiences, technical articles, opinions of any and all exotic cat related subjects (including LIOC) all short and long items, also day to day experiences, announcements of : adoptions, pregnancies, births, deaths, (with autopsy report if one was done) all subjects of interest; all questions - give other members a chance to help.

SALARY: The love and gratitude of all exotics, their owners and the Newsletter Editor.

STARTING TIME: IMMEDIATELY! The newsletter is waiting on YOU.

Don't Miss It!

CATS



Planning on attending Convention this August? Don't miss the opportunity to see CATS! At special discount rates. We'll be going to see this production on Broadway, Wednesday, August 6th. Because these performances are sold out months in advance, we ask that you notify us NOW if you will be attending. WE MUST MAKE RESERVATIONS (FOR GROUP RATE) PRIOR TO FEBRUARY 15th. Payment will be due no later than February 28th. The price is \$32.50 per ticket.....normally \$45. This is a matinee performanceunfortunately, there can be no late additions-reservations must be made NOW. Response has been excellent so far, won't you join us.

CONTACT SUZI WOOD
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If you can't make CATS, do try to join us later, following is a tentative schedule for Convention '8:

Thursday, August 7th - All day trip to Atlantic City

Friday, August 8th, AM- Selected Speakers

Afternoon - Membership Meeting and Board of Directors Meeting

PM - Dinner Cruise on the Delaware River

Saturday, August 9th, AM-Historical Tour of Philadelphia, including the Liberty Bell

Independence Hall, Afternoon we go to the Oldest Zoo in the US.

Evening - Banquet, Lottie Presentation and Auction

Sunday, August 10th - Brunch, General Meeting and visiting.....

PLEASE JOIN US



CONVENTION!



Striking A Balance

By Richard H. Pitcairn, DVM, PhD.

"My vet has spoken to me about the possibility of having my three cats vaccinated for feline leukemia. He is very positive about the vaccine and believes it to be quite effective. I know you are not terribly enthusiastic about vaccinations and I have followed your recommendations in that area. Do you think it would be wise to have my cats vaccinated for leukemia? Do you think it is a safe, effective vaccine?"

The last sentence of this reader's letter really puts this issue in a nutshell. There are two factors of concern with any vaccination - first that it be safe and not cause further illness or deterioration of health, and second, that it be effective and actually protect against the disease for which it was developed.

My lack of enthusiasm about vaccination (in general) is a result of my experience with other vaccines. I have seen a number of stubborn, chronic illnesses in dogs and cats that have apparently begun with a vaccination. Chronic sinus or eye infections in cats and development of skin eruptions, allergies and other immune disturbances in dogs are the most common, long-term post-vaccination conditions that I see in my practice.

When I received my training for a PhD. in immunology, it was implied that vaccines were entirely safe to use and could cause no harm. Now I am not so sure. The issue of illness and death in children after routine vaccinations like DPT is now being addressed in human medicine, but so far, to my knowledge, this concern has not been expressed by many veterinarians.

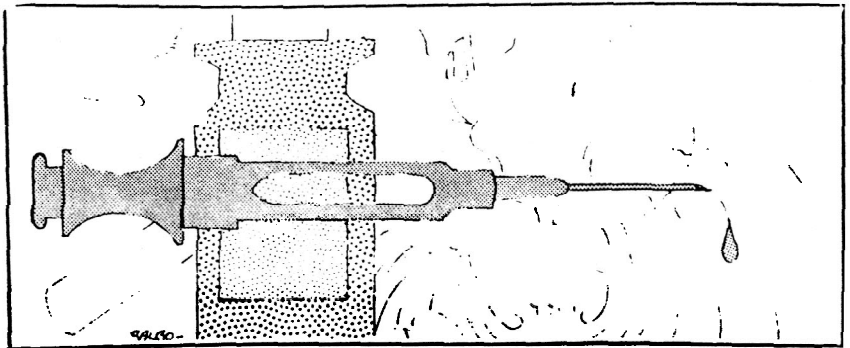
One exception to this is Dr. W. Jean Dodds, a veterinarian and chief of the laboratory of hematology for the New York State Department of Health, in Albany, N.Y. Since 1981, her laboratory has been compiling careful histories of animals having blood disorders involving disturbances in the immune mechanism. She reports that many of these cases were vaccinated one day to three weeks prior to the illness. A high percentage of these cases have been severe and resulted in permanent side effects, poor prognosis or death.

When I called Dr. Dodds to discuss the new leukemia vaccine, she expressed caution. "I'm concerned about the vaccine," she advised. "It shouldn't be given with any other modified live virus vaccine, at a time when surgery is performed or to pregnant animals." In response to my question - Should we recommend use of the vaccine? She replied, "We have no option, we have to use it, though possibly it's not the answer."

Why should there be problems with vaccines at all? Usually they result from an infection established by the vaccine virus (which is meant to be less severe than the 'natural' disease) or because of a severe abnormal reaction to the vaccine material itself (such as an allergic reaction to some of the proteins).

The positive or negative effect of a vaccination centers to a great extent on the ability of the animal to respond properly and this is determined by the strength of the immune system and the level of overall health at the time of vaccination. My chief objection to vaccination schedules typically in use is that often these considerations are overlooked. Like Dr. Dodds, I don't think vaccinations should be given when an animal is in poor health, pregnant, undergoing surgery or, especially, when also receiving a corticosteroid injection for allergies. I am also concerned that vaccination is done too frequently (often yearly) and that several vaccines are combined and given at the same time.

But let's get back to the leukemia vaccine question specifically. This new vaccine is different in that it is made of vaccine "pieces" rather than the whole virus.



Presumably, this makes it safer and prevents the chance of disease developing from the vaccine. Because the leukemia virus (when intact) tends to depress the immune system, using what's called a 'subunit' vaccine (some of the virus pieces) avoids this complication. According to

the manufacturer's laboratory study of 25 cats given the disease virus, about 80 percent of those vaccinated (as compared with 30 percent of those unvaccinated) were protected against persistence of the virus in the bloodstream. Also, 92 percent of the vaccinated cats did not develop tumors, as compared with 40 percent of the control cats. It should be noted that these cats were exposed to laboratory conditions. Hence, they were faced with a challenge much more than that which natural conditions would have presented.

These figures are very encouraging in the direction of using the vaccine. However, as far as I can determine, relatively few cats have yet been carefully studied as to their immunity and reaction to the injection series, so we must still consider the new vaccine as very promising but essentially not completely proven. Also, there have been some negative reactions (vomiting, diarrhea, fever, listlessness or difficulty breathing) but fortunately in very small percentage so far (estimated four cats out of a thousand by the manufacturer).

I think another 6 to 12 months from now the picture will be much clearer. As a large number of cats are now getting the vaccine.

I hope this vaccine will work, and considering the seriousness of the disease, it might make sense to get it for your cats at this time. However, I am not yet recommending the vaccine to my own clients. This may be too conservative a position to take. Yet the more I learn about the nature of the immune system, the more concerned I am about the increasing number of vaccine viruses we are giving the animals and possible repercussions that may result.

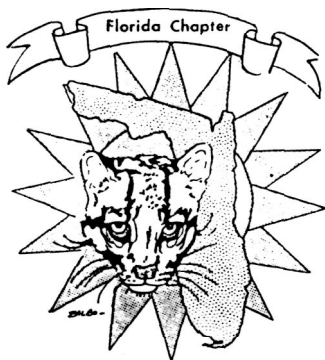
If you decide to have your cats vaccinated, I strongly recommend that they first be determined to be in good health by your veterinarian and that the vaccine be given by itself and not mixed with any others.

REFERENCES

1. DPT: A Shot in the Dark, by Harris L. Coulter and Barbara Loe Fisher, Hartcourt Brace Jovanovich, N.Y., 1985
2. Immune-Mediated Diseases of the Blood, by W. Jean Dodds, *Advances in Veterinary Science and Comparative Medicine*, Vol 27, p 185, 1983.
3. From the product description leaflet included in Morden's Leukocell vaccine.
4. Telephone interview (5/85) with Dr. Reimers of Morden Laboratories, Lincoln, Neb. producers of Leukocell feline leukemia vaccine.

Reprinted from World Pet Society Newsletter





MEETING REPORT

We did something different this time. Our meeting was at the home of SHAMU who resides at Sea World in Orlando.

Danny fast-talked them into letting us in at half price and got Ted Turner who is ShamU's trainer to give us some first hand info on the newest member of the show - BABY SHAMU. She was born September 26th, weighing in at 350 pounds and a length of 6 feet. At six weeks old, she is now a bouncing 750 pounds and is an absolute joy to watch as she follows Mama around as she does the show. She is the only surviving killer whale to be born in captivity. Mama was back in the show one week after giving birth following a gestation period of 17 months. Mama is a real trouper as she did the show the night before giving birth. Mama is now eating 220 pounds of fish a day, up from around 130 pounds, while baby is nursing which she'll do until she's about one year old. During the year she will eventually begin to eat fish at her own pace. But, for now, she shows no interest in them and is content to live on Mama's milk. She has doubled her birthweight in six weeks, so I'd say Mama has better milk than Borden's.

As the baby grows, it will be a learning experience for the trainers. Since she is the first to survive, the only thing they have to go by is observing killer whales in the wild. The baby stays right by her mama's side, even during the show, and already knows the show so well that when Mama has to make her run around the pool and baby can't keep up, she will take a short cut and meet mama on the other side. It is amazing to watch these huge animals perform with their trainers and do what they're told. There is such a bond of love and trust between them. I'm really impressed as I can't even get Tara to quit snapping at me, although she left a big impression on me too-right on the back of my leg.

We really appreciate Ted taking the time to talk to us. He was very interesting and informative. You could listen to him for hours. Thanks, Danny for arranging it.

After the show, we had a short business meeting. The topic of discussion was possibly getting a collectors item for our club to raffle or auction at next years convention. I brought release forms to sign, which we decided to hold off til next time, as this meeting was rather "fishy" and didn't seem to be a threat to our health. We also got some volunteers for up-coming meetings which is always nice, so we can plan ahead.

After the meeting, everyone headed for lunch and we were free to enjoy the park the rest of the day. The weather was a gorgeous 85° with the sun about to blind us with it's dazzling brilliance. (How's that for a plug for the tourist industry?) Truly. It was a beautiful day, also arranged by our weatherman, Danny. We all had a good time feeding and petting the dolphins. Dennis and Connie took turns getting us lost throughout the day as their shortcuts took us miles around the attractions we were looking for. Once in awhile we would get lucky and find a show before it was over (just kidding guys). I know its hard to drink margaritas and walk at the same time, let alone try to read a map too.

We had a really good turnout. Of course Danny and I were there, just back from a trip to London where I had the "PRIVILEGE" of getting a personal tour of the Crapper's toilet museum. He didn't get to see the toilet, but he did get to see a royal flush. Dennis Grimes and yours truly were there along with Jean Hatfield bringing 3 two week old cougar cubs that she kept at Danny & Ellen's house. Dennis and I followed them home in the evening so we could cuddle the babies. We had

some long-time members of the club show up that we haven't seen in quite a while, Don & Bonnie Hadley with children Heather and Brian, the Harvells are back with us again. Glad to see all of you. Also attending were

Dr. Patino and daughter Monica (Happy 9th Birthday Monica), John Melz, Vince Cloffe, Gladys Lewis with friend Mary Kay, Connie Hatfield, Jim & B.J. Scott and Jamie Wheatly. We missed Arthur and Gertrude Freeman. Gertrude wasn't feeling well so decided to stay home and take it easy. We look forward to seeing them next time. It was really an enjoyable day, with lots of fun and fellowship. We lost track of some of you after lunch. Sorry about that. I hope you all had a good time and got to see as many things as possible.

Our next meeting will be in January down south at the home of Jim & B.J. Scott. Hope all can make it. Let me be the first to wish you a Happy Holiday Season.

Submitted by your fellow feline fanatic and friend from Florida Barb Grimes.



Overview



Joe & Jean Maynard, (of Buttons fame) have incorporated as a non-profit organization - Exotic Feline Breeding Compound. Their main concern is the continuance of the exotic cats with emphasis on the golden cat and Chinese Leopards., it seems.

They have been especially interested in achieving an increased population through research in artificial insemination. On October 11 & 12, a research team from the National Zoo visited-a working weekend for all concerned. Semen was collected from all adult males and was tested for potency under different conditions, with the discovery that male fertility levels vary with the season of the year, just as the females heat cycles vary.

Semen, if frozen at sub-zero temperatures can be used in the future to help save endangered species.

They were especially pleased to receive SEE TAWNG NIM, a male golden cat, 3 years old. Called CF he arrived from Washington and is in prime condition with an excellent sperm count. Sundari is his prospective mate. EFBC now has six of less than 20 golden cats recorded in captivity in the WORLD....and the ONLY colony.

The Maynards express their appreciation for the many folks who have helped and contributed to their cause this past year. For those who would like more information on their work (or to send contributions) they can be reached at

E.F.B.C.
Star Route 1, Box 84
Rosamond, CA 93560

Editor's note,...some of the artwork in this issue is from EFBC's newsletter- note the JPM signatures!



"I believe in Santa, wonder if he believes in me?"

Cats Through the Ages

Jeffrey F. Balough, D.V.M., Ph.D.

Cats are the most specialized of all living Carnivora, and have maintained their high degree of specialization for many millions of years. They are superbly designed, muscularly engineered hunting creatures, known today for their supple agility and extreme quickness of action. With their strong steely limbs, sharp retractile claws, sinewy necks, and powerful canine and carnassial teeth, cats are the most perfectly adapted of all living mammals for a hunting and flesh-eating existence.

On a geologic time scale, the development of cats from relatively unspecialized creatures into fully specialized carnivores was exceedingly rapid. During the later stages of the Eocene epoch, some 45 million years ago, cats diverged from their common civet ancestry to produce what appear to be two independent but coexistent lines, both of which had acquired their principal individual characteristics by Oligocene time (approximately 30-35 million years ago).

One line, as exemplified by the Oligocene form *Dinictis* (Fig.1), consisted of agile, quick-limbed predators possessing rather large and heavy upper canine teeth. These cats evolved toward the present, and their upper canines became progressively reduced in size, and their overall structural appearance began to approach that of the modern felines. The cats of today, whose immediate ancestors first appear in the fossil record during the early Pliocene time, thus probably represent descendant forms of this ancient lineage.

The second line of cats, as exemplified by the Oligocene form *Hoplophoneus* (Fig.2), were slower moving heavier carnivores, with greatly elongated upper canines. As these cats evolved, the size and strength of their upper canines increased, culminating in the most renowned of all of these so-called "saber-toothed" cats, the Pleistocene form *Smilodon* (Figs. 3 & 4). Fully as large as a modern tiger or lion, *Smilodon* was constructed however, on a much more massive scale, with powerfully developed forelimb, shoulder and lumbar muscles (Fig 3). During an attack, the finely serrated saber teeth probably acted as stabbing weapons, wielded with deadly ferocity by the enlarged and cable-like muscles on the neck and shoulders (Fig 4). This action undoubtedly opened gaping wounds in the side of the struggling prey, wounds which were then rapidly expanded by a combined rasping and scissoring action of the embedded jaws.

Contrasting strongly with *Smilodon* was its feline contemporary, *Panthera leo atrox*, the great American lion (Figs 3 & 4). This gigantic felid, fully one fourth again as large as any modern, living cat, possessed nevertheless a suppleness, quickness and sure-footed ability unseen in the *Smilodon*. In habit and character, *Panthera leo atrox* most probably resembled its modern cousins and descendants.



FIG. 1 - Restoration of the Oligocene cat *Dinictis*. Illustration by R.B.Horsfall, from *A History of Land Mammals in the Western Hemisphere*, by W.B. Scott; N.Y. The Macmillan Co., 1927

Today these incredible giants have all disappeared, but have left behind their skeletal remains in the fossil record, as well as their flickering images painted on the walls of earthen caves by the hand of ancient man.

The evolutionary history of *Dinictis*/*Panthera* group of cats suggests that these animals became increasingly adapted to the stalking and killing of smaller more agile game - game that remained in abundance through the later Tertiary period and still exists today. The saber-tooth cats, on the other hand, probably preyed upon more massive, slow-footed, thick-skinned animals, such as elephants, mastodons and mammoths. With the disappearance of these titans in the Pleistocene epoch, and an inability to compete with their more agile feline relatives (and possibly with primitive humans) in the capture of nimble prey, the saber-tooth cats vanished from the earth



FIG 2 - Restoration of the Oligocene cat *Hoplophoneus*. Illustration by R.B.Horsfall, from: *A History of Land Mammals in the Western Hemisphere*, by W.B.Scott; N.Y. The Macmillan Co., 1937

Table 1. THE CENOZOIC ERA
(The Age of Mammals)

PERIODS	EPOCHS	APPROX. TIME SPAN (millions of years ago)	CHARACTERISTICS
QUATERNARY 2 million years duration	Holocene	0 - 0.01	Modern History
	Pleistocene	0.01 - 2	Great Ice Age
	Pliocene	2 - 5	Further climatic cooling, first humans
TERTIARY 63 million years duration	Miocene	5 - 24	Grassy, open plains; mountain-building first man-like primates, first bears
	Oligocene	24 - 37	Climatic cooling; volcanic activity first apes; first true cats
	Eocene	37 - 55	More temperate climate, rise of more specialized mammals; first elephants
	Paleocene	55 - 65	Humid, semitropical climate; primitive unspecialized mammals, first horses

TO 1986

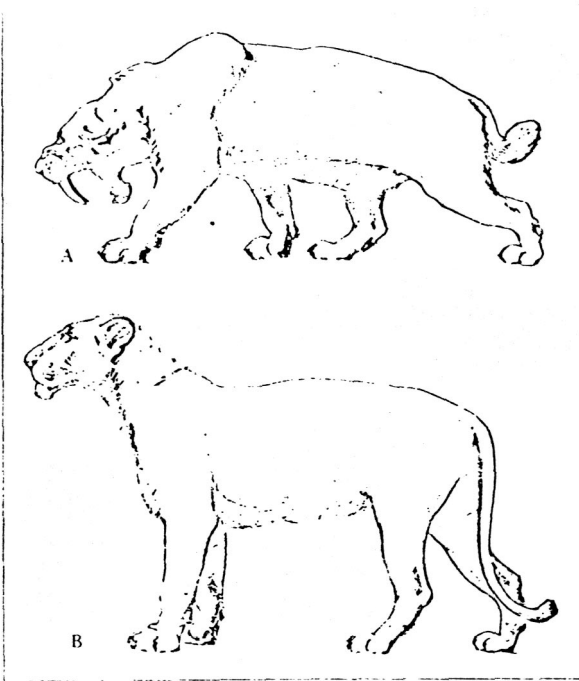


FIG 3 - Comparative study of (A) *Smilodon fatalis* and (B) *Panthera leo atrox*. Restorations by C.R. Knight under direction of J.C. Merriam, from: *The Felidae of Rancho La Brea*, by J.C. Merriam and C. Stock; Washington D.C., Carnegie Institution of Washington, 1932

Today there are approximately 36 species of cats (family Felidae) in the Americas, Eurasia and Africa. In the family Felidae, three major groups are recognized. Twenty-eight species are tentatively placed together in the genus *Felis*, and are often referred to as the "lesser" cats. These include (among others) lynx, bobcat, caracal, margay, ocelot, jungle cat, fishing cat, sand cat, and domestic cat. The second group of cats consists of six species in the genus *Panthera*, often referred to as the "great" cats. These are lion, tiger, jaguar, leopard, snow leopard, and clouded leopard. Lastly, standing alone in the genus *Acinonyx*, is the only cat with nonretractable claws, and renowned throughout the world as the swiftest and most agile cat of all - the cheetah.

Reprinted from *Perspective on Cats*
The Cornell Feline Health Center Newsletter

During the Holiday season we traditionally stop to reflect on the year past. This is the time to assess our failures and analyze our successes; to pinpoint our deficiencies with hopes of correcting them in the bright new year.

It is also the time to give thanks for our many blessings and to ask for renewed strength to face the challenges of the New Year.

Because of each of you who contributed to the Newsletter this past year, I was able to produce 6 newsletters that went out on a timely basis. Once a Newsletter is put together, and retrieved from the printer the work is just starting! It must then be inserted into envelopes with renewal notices included, addressed, stamped, sealed and mailed. This chore has been handled by the folks of the Oregon Educational Exotic Feline Club, to whom we all owe a large THANKS!

To each and every contributor, who made the Newsletter possible please accept our Thanks, not only mine as Editor, but the entire membership's. These folks took the time to share. Through their experience we learn. This enables us to better care for the most beautiful of God's creatures we have chosen to share our lives with.

THIS IS LIOC.

There is no such thing as "old news" to a new exotic owner. We, more experienced folks, forget the wonder of that first kitten, the joy of spotted love. This was brought ever so close to home recently when I acquired a kitten of a different species recently. It has been a while since I've had a kitten, and even longer since I had an exotic which truly was a pet, my herd dwindling due to old age. It is thru the eyes of a "first-time" owner that I face the challenges of this not so little bit of fluff. It renews the meaning of LIOC and our network of folks devoted to these precious beasts, those ever-ready to help, answer questions, and just be there.

To all of you, I put forth the challenge to share that very special Spotted Love in 1986. By continuing the breeding efforts that make these kittens available; by sharing your experiences so that others may learn, if even through your heartbreak, a lesson that may save a life. Share too your joy, so that those who have not yet taken the plunge into spotted love may smile or those who can no longer keep a cat may remember when...

Through the newsletter, share your thoughts so that an honest dialogue of discussion can bring forth even more thoughts which might lead to a better way. Make your feelings known to your new Board of Directors, those folks who, by actively governing our organization can lead us to an even brighter future. To these special people we also say "Thank You".

We have been given a very special gift - this very unique creature - we call exotic, whether it be spotted or solid, large or small. But with this gift there are responsibilities. In 1986 let us resolve to fulfill those to our utmost.

A new twist

Called "Claw-Safe" the newest invention of Ron Hartigan claims to stop cats from clawing and thereby damaging furniture. It consists of tiny wooden toenail guards that fit over a cat's natural claws, held by quick-drying cement.

Veterinarian Gerald Johnson of Delray Beach, Florida, says "It's a beautiful option for those who feel surgical declawing is inhumane."

The guards stay on until the claw's outer skin is shed, from one to two months for an indoor cat and up to two weeks for an outdoor cat. Starter kits cost about \$9. with an additional 100 guards at about \$2.00.

If any LIOC members try these, please share your experience with us. Your editor has not seen these guards but wonders what problems might be caused by ingesting these?

WHAT PRICE DID THEY PAY FOR YOUR FUR COAT?



THEY WERE GASED, ELECTROCUTED,
TRAPPED OR STRANGLER

Nutritional Management and Congenital Defects of Exotic Felidae

By Michael T. Walsh, DVM
University of Florida College of Veterinary Medicine
Reprinted from Small Animal Practice

Exotic feline nutrition has lagged behind that of the domestic cat in product availability, palatability and owner acceptance. When advising the exotic cat owner on dietary needs, it is often easiest to recommend that the animal be put on a commercial product such as Zu/Preem. What the practitioner must realize is that a dietary change may be more traumatic for the owner than for the cat. There is often a period of non-acceptance of a new diet by the cat so that the owner perceives the animal to be "Starving". Now that the owner has been convinced to switch to a diet that the cat will not eat, the owner will be ever more steadfast in avoiding dietary change and may lose confidence in the veterinarian. Open, honest communication between the veterinarian and the owner will help to maintain a working relationship, but the veterinarian should be able to offer alternatives to a complete diet change. Often a diet may only require supplementation to be fairly complete and still be accepted by the owner.

In the past, the most common diets fed to cats were organ-meat-based. This was a traditional diet that was often passed from seller to buyer or from generation to generation of breeders. This diet will be discussed in following sections.

A great deal has been written on feline nutrition in the last 40 years. In 1964, Patricia Scott addressed the general nutritional requirements and deficiencies of the domestic cat. Further work has provided a clear understanding of many dietary requirements.

Malnutrition occurs at any stage in the life span of a cat and may influence many aspects of growth, maintenance, and reproduction such as in utero development, litter size, and postnatal care. An adult on a deficient diet may only show a decrease in vigor or life span. It has been shown that the immune response is closely tied to the nutritional state of the animal.

As with all animals, water is the most essential dietary ingredient. Requirements may range from 44 to 88 ml per kg per day. The need for supplementation will fluctuate based on the water content of the food source, activity, temperature, and so on. A fresh, renewable water source should be provided at all times.

CALORIC NEEDS

The energy requirements of a cat can be supplied from proteins, fats and carbohydrates. An adult cat may require approximately 30 kcal per pound of body weight per day, whereas a kitten's needs may be three to five times that amount. The actual daily requirements may be higher depending on the energy required for warmth, activity, lactation and so on.

Protein requirements differ for the cat from that of the dog in that a higher proportion of the caloric need should be provided as protein. On a dry weight basis, kittens may require 16 to 32 percent and adults up to 21 percent of the diet as protein. The lower requirement of protein for kittens may be satisfactory if all amino acid requirements are met. This high requirement is necessary because the cat has a limited capacity to conserve essential amino acids and nitrogen. Protein needs can also be approximated by providing 5 g per kilogram per day for an adult.

Later research has concentrated on the specific amino acid requirements of the domestic cat. The cat is the only mammal known to require taurine, an essential amino acid. In most animals, cysteine and methionine are largely converted to taurine, whereas in the cat they are converted to feline. As a result, diets fashioned for other species from bovine milk sources may be very deficient in taurine, leading to retinal degeneration and blindness. Taurine also has a regulatory effect on cardiac muscle and nervous tissue and has been used in preliminary experiments as a treatment of epileptic seizures in humans.

Arginine is another important essential amino acid for the cat and its absence from one meal can lead to NH intoxication and death. Table 1 lists the other important amino acids of the cat. There is some disagreement as to the number of essential amino acids in the cat, with the number ranging from 11 to 13.

The dietary requirement for fats is not as well established. Research on the essential fatty acids of the cat has been somewhat behind when compared to research

CLINICAL SIGNS	A	B ₁	B ₂	B ₆	B ₁₂	Niacin	Panothenic acid	Choline	Folic Acid	D	E
Anemia				X					X		
Anorexia	X	X	X	X					X		X
Weight Loss	X	X	X	X	X	X	X	X	X	X	
Vomiting		X									
Diarrhea						X					
Cataracts			X								
Conjunctivitis	X										
Corneal changes	X										
Retinal degeneration	X										
Photophobia	X										
Testicular atrophy	X										
Fetal Death	X										
Stillborn	X										
Weak birth	X										
Skeletal deformities	X										
Rickets										X	
Weakness		X									X
Ataxia	X	X	X								
Tremors	X	X	X								
Paralysis	X										
Convulsions		X	X	X							
Polyneuritis		X	X								
Neck ventroflexion		X									
Oral ulceration		X	X			X					
Protruding claws		X									
Squamous metaplasia	X										
Urolithiasis				X							
Steatitis											X
Fatty Liver							X	X			
Liver necrosis											X
Poor coat	X		X		X						

TABLE 1 - ESSENTIAL AMINO ACIDS OF THE CAT

Arginine	Phenylalanine
Cysteine	Taurine
Histidine	Threonine
Isoleucine	Tryptophane
Methionine	Tyrosine
Leucine	Valine
Lysine	

Conducted on other food groups. There is evidence to suggest that deficiencies in dietary fatty acids result in the same clinical syndromes in cats that are seen in other species. Essential fatty acids deficiencies occur with diets that contain vegetable oils as the only source of fats. Cats can utilize a large percentage of their diet as fat, but unsaturated fats such as those found in red tuna or rancid oils may result in steatitis. Fats and proteins are used to make a feline diet palatable.

Carbohydrates are not a necessary requirement for a feline diet but can be well utilized. Lactose and sucrose do not appear to be as well tolerated as polysaccharides, and diets containing cow's milk or whey, which are both high in lactose, may lead to diarrhea in some individuals.

VITAMINS

Dietary vitamin needs of the domestic cat have received more attention than those of exotic cats, but they are likely to be very similar. Cats can not synthesize vitamin A from beta carotene, so they are dependent on a dietary form. The domestic cat requires 160 to 200 units per pound of body weight of vitamin A. It was found that adding 100 units of vitamin A per pound of body weight to the diets of exotic cats at a zoological park in England raised their liver vitamin A levels to near normal. Another peculiarity in feline vitamin needs is that of a need for niacin supplementation. Although most animals synthesize niacin from tryptophan, the cat catabolizes tryptophan in an alternate pathway. Thiamine also merits some attention, because the cat has a fairly high requirement for this water soluble vitamin. Thiamine can be destroyed by the canning process (over-heating) by aminase (present in some fish) and by sulfur dioxide (used as a preservative). Signs of thiamine deficiency are listed in Table 2. Treatment with 1.1 to 2.2 mg per kg of thiamine will usually result in a rapid recovery of less than 24 hours. Recent work has suggested that there are at least three different manifestations of thiamine deficiency—an acute dietary form, a chronic dietary form and a familial dependency. Although all three types have similar clinical signs, the familial form (as seen in one family of cats) is controlled by daily megadoses of

thiamine. Symptoms associated with pyridoxine (B₆) and riboflavin (B₂) as well as pantothenic acid, choline and folic acid are listed in Table 2.

MINERAL COMPONENTS

Sodium and potassium requirements are given in Table 3. Calcium deficiency is fairly common in cats on an all-meat diet. Nutritional secondary hyperparathyroidism is most common in younger animals, in which there is a greater calcium requirement during growth. If the cat is

TABLE 4. WEIGHT OF CAT RELATED TO THE AMOUNT OF FOOD (POUNDS) REQUIRED TO SUPPLY ITS ENERGY NEEDS*

CAT'S WEIGHT	ENERGY KCAL	ZU/PREEM	LEAN BEEF	CHICKEN NECKS
10 lb.	300	.29	.49	.91
100 lb.	3000	2.8	5.0	9.0

* From M.E. Fowler, Personal communication

suckling the burden is often shifted to the mother until the kitten is weaned. Adult cats can suffer the same problems if they are on an all-meat diet for an extended period. The clinical signs of deficiency can range from muscular cramps to pathologic fractures, and serum calcium levels may not reflect the animal's true calcium status. The phosphorus content of all-meat diets is extremely high, as seen in Table 3. Both magnesium and phosphorus are important components of the ash content of the diet. Suggested levels for iodine, copper and other minerals listed in Table 3.

DIET COMPARISON

Although the trend with zoos has been to shift to the use of commercial diets, there are still many individuals who insist that their cats do well on a total meat diet or a chicken neck diet.

Table 3 compares the nutritional content of some of the older diets to a commercial diet, and to the needs of a small adult cat. The chicken neck diet supplemented with vitamins has a better calcium:phosphorus ratio than an all-meat diet but is deficient in its protein base and some B vitamins. Although this diet eliminates the secondary nutritional hyperparathyroidism seen with the organ meat diets, its ash content is quite high, reaching 15 percent or greater. A pure muscle meat diet is deficient in calcium, copper, iodine, vitamin A and riboflavin, even though energy requirements are better provided by the meat diets, there are obvious trade-offs. Table 4 illustrates the difference in the energy contents of the foods in Table 3.

Often the choice of diet is based on financial considerations. A diet consisting of whole animal components that is processed and prepared may be too expensive for many small breeders. Some feed companies also have minimum purchase requirements, which makes bulk storage necessary and leads to some wastage. When the consulting veterinarian is not able to switch the diet to a commercial, balanced diet, because of financial needs or personal prejudice, supplementation can be used to bolster a deficient diet. A chicken neck diet can be supplemented with multiple vitamin mixture and a protein source such as calcium lactate, calcium gluconate, tricalcium phosphate or bone meal (5-10 percent of the diet) can be used to correct the calcium/phosphorus imbalance. If these calcium sources cannot be found, then calcium carbonate used at 0.5 to 1.5 g per 100 g of food will help balance the calcium deficiency. It is important to note when a calcium product also contains Vitamin D because the total daily requirement for Vitamin D is fairly low and may not require any additional supplementation.

NEONATAL NUTRITION

Many exotic neonates are removed from their mother at an early age in order to facilitate hand raising. This often presents a problem in choosing a reliable milk replacer and forces the neonate to rely on one unchanging formulation for maintenance and growth. In

TABLE 3. Comparison of Requirements of Small Cat to Ingredients of Common Diets*

	REQUIREMENT PER CAT	CHICKEN NECK WITH VIONATE	BEEF HEART	HAMBURGER	ZU/PREEM
Protein(a)	12-14%(wb)	7.42%	20%	17.6%	16%
Protein(y)	14-16%				
Energy(a)	30 kcal/lb	329kcal	490 kcal	1216 Kcal	1115 kcal
Ca	0.3-0.5%	52 gm/lb	23	45	0.65%
Phosphorus	0.15%	24 gm/lb	885	708	0.35%
Ca/Phosphorus	1.2-1.5/1	2/1	1/38	1/16	1.6/1
Vitamin A	2000 IU	1700	90	160	10,500IU
Vitamin D ₃	50-100 IU	104	-	-	485 IU
Vitamin E	0.36-3.6 mg	-	-	-	45
Vitamin C	?	1134	9	-	-
Vitamin B ₁	0.4 mg	0.29	2.42	0.35	3.24
Vitamin B ₂	0.2 mg	0.9	3.98	.72	7.0
Vitamin B ₆	0.2-0.3 mg	.04	-	-	-
Vitamin B ₁₂	0.01 mg	-	-	-	0.09
Niacin	2.6-4 mg	7.8	34.1	19.5	35.5
Choline	100 mg	27 mg	-	-	662
Folic Acid	0.002 mg	0.01	-	-	0.47
Na	20-30 mg	-	390	-	0.17%
K	80-200 mg	-	875	1070	0.23%
Mg	8-10 mg	2.0	-	-	0.01%
Fe	5 mg	30	18.1	12.2	79mg
Cu	0.2 mg	0.26	-	-	5 mg
I	0.07-0.2 mg	0.104	-	-	0.09 mg
Mn	0.2? mg	0.34	-	-	4.9 mg
Zn	0.24-0.3? mg	-	-	-	17.3 mg
Co	0.16? mg	-	-	-	0.68 mg
% A	4%	17%	-	-	4%

(a)=adult, (y)=young adult (wb)=wet basis a dash indicates that item was not tested *per pound

Table 5. Comparisons of natural milks used

TYPE	COW'S WHOLE MILK	DOMESTIC CAT (EARLY)	DOMESTIC CAT (LATE)	LEOPARD	KMR	ESBILAC
		LACTATION	LACTATION			
Water	87.0%	80-82%	80-82%	80.6%	82%	85%
Fat	3.5%	3.4%	5.3%	6.5%	4.75%	6.38%
Protein	3.5%	4.0%	7.5%	11.1%	7.5%	5.0%
Carbohydrates	4.8%	3.6%	4.3%	4.2%	4.5%	3.4%

a study of domestic cat milk, the composition of the milk was monitored from parturition to greater than 43 days postpartum. It was found that the amount of protein, fat, carbohydrate, calcium and manganese increased during the course of lactation. As a result, some replacers may be deficient at different periods of lactation. With this in mind, comparisons between milk types should indicate the time of lactation when taken and the mother's diet when possible. The three most common diets used are probably cow's milk, KMR and Esbilac. Table 5 compares the replacement formulas to natural milks. There are disadvantages to each diet so that none are universally used by zoos or private breeders. Cow's milk is deficient in protein and in calories when used for the cat. Powdered cow's milk should be used at twice the normal strength or, if used at normal strength, it should be supplemented with a soluble protein and B vitamins. Diarrhea from lactose intolerance may result from the use of cow's milk. Esbilac is one of the more common replacements.

The major advantages with this product are that it is palatable and does not result in clinical diarrhea as often as the other choices. The major disadvantages are that it is low in protein and has been associated with cataract formation. Diet induced cataracts have been linked to many amino acid deficiencies as well as to certain vitamin deficiencies. There may be a critical period when the lens is more susceptible to deficiencies. Owners should be warned of the possibility of cataract formation and protein deficiency when kittens are put on an Esbilac diet.

KMR appears to be a more obvious choice as a milk replacer for exotic cats. The major disadvantage of this diet that is cited by breeders is its tendency to cause diarrhea. This can be very debilitating for a young cat that is also adjusting to the loss of its mother, and very disturbing to a new owner. Because any radical change in diet can result in diarrhea, the owner should understand that a new diet should be introduced slowly to decrease this possibility. As a cow's milk derivative, KMR contains a high level of carbohydrates, the bulk of

which is lactose. Initial lactose intolerance may be involved in the pathogenesis of this diarrhea. This effect may be decreased by diluting the liquid to a 50 percent solution, which is increased over a few days time. Kaopectate has been used to aid in diarrhea control. Proper sanitation of diet equipment will decrease the possibility of spoiled or contaminated food, which can also lead to diarrhea.

It is during the weaning period that the owner should strive to acclimate the young animal to a balanced diet, rather than to have to readjust it once more. A variety of foods may be initially offered, but the emphasis should be on a balanced commercial diet when possible.

CONGENITAL DEFECTS IN EXOTIC FELIDAE

A congenital defect is defined as a defect in structure and/or function present at birth. These defects may occur in only one system or may affect multiple body systems. The incidence of congenital defects in most populations is estimated at around 1 percent more or less. The level of incidence is one that may be expected in populations that are not seriously handicapped by poor diet, mismanagement, and inadequate gene pools. The type and frequency of congenital problems in the exotic felidae is not well documented, although an excellent review of congenital defects of domestic cats was done by Saperstein. The exotic populations available for study have usually consisted of those in zoos or in private hands. Often the emphasis was not on reproduction but on simple maintenance of members of a species. Pedigree records were not usually kept, kets may have been deficient, and necropsies were often not done. As concern for species welfare has increased and wild populations are threatened with extinction, more attention has been given to the interrelationships of animal management and the causes of neonatal mortality.

There are two major influences that may be responsible for congenital defects, inheritance and environment. The genetic factors are the best understood after first identifying a disease that is occurring in a familial pattern, detailing the relationship between related member of groups, then analyzing this relationship with

TABLE 6. CONGENITAL DEFECTS OF EXOTIC CATS

DEFECT	DESCRIPTION	SPECIES
Cleft Palate	Nonclosure of palate	Lion, tiger
Aplasia of trachea	Cusps of tricuspid valve are fused	Lion
Epstein's deformity	associated with foramen ovale	
Persistent ductus arteriosus		Lion
Diaphragmatic hernia	Protrusion of viscera through diaphragm	Bengal tiger, Leopard
Umbilical hernia	Protrusion of viscera through abdominal wall at umbilical area	Tiger, cheetah
Ventricular septal defect		Lion, cheetah
Thymic hypoplasia	Small fatty thymus	Tiger
Partial albinism	white tigers	Tiger
Tail kinked	distal end of tail; affects last few vertebrae	Cheetah, Florida Panther?
Tail curled	tail curled about 360°-full expression between 4-14 months	Cheetah
Ocular dermoid	haired dermoids involving bulbar conjunctive and third eyelid	Lion
	haired dermoid extending onto the cornea associated with eyelid agenesis laterally	Geoffroy Cat
Ocular colobomata		Snow leopard



➔ NUTRITION - CONTINUED

controlled breeding trials to determine the mode of inheritance. Before this can be accomplished, the environmental factors must be controlled. Sound management practices should help to eliminate or control such factors as dietary deficiencies, temperature fluctuations, access to toxic materials, and so on. All of these factors may influence the degree to which an animal is affected, even if the problem has a genetic base.

There is disagreement among investigators as to which conditions of the domestic cat are most common. Priester felt that the nervous system was most commonly affected, whereas Jude had felt that oral cavity and appendages were involved more. When all the species are viewed as one group, the central nervous system, skeletal system and muscular system are the most frequently affected systems.

Saperstein listed defects in the domestic cat in the central nervous system; eye and ear; and musculoskeletal, circulatory, digestive, urinary, reproductive and integument systems. He also noted hernias, defects in metabolism, congenital duplication and chromosomal abnormalities. It is not within the scope of this article to review all the presentations in each system.

Table 6 lists some of the previously reported congenital defects in exotic cats as well as some that have not been reported as of yet. This list does not include much of the later European data. Although some defects such as cleft palate have a fairly well established genetic basis, there is still some question as to the role of some nutrient deficiencies in the expression of some deformities. Vitamin A deficiencies have been implicated in heart and lung deformities as well as in diaphragmatic hernias, but it is not known to what degree the diet is at fault.

It is hoped that this article will stimulate veterinarians to stress the need for good necropsies and thorough reporting of defects as well as the keeping of accurate breeding and diet records.

Contributed by John Perry

MEETING REPORT.

Our 4th formal meeting was held at Dave Baskin's beautiful home in Massachusetts. It was a pleasant Sunday afternoon. We had a smallish turnout, about 10 members and 10 guests attended. We had several creatures to keep our eyes and mouths moving, cougars and domestics of course, plus two over-active, creative Safari kittens who loved playing with the 8 month old bobcat, Scooby-doo.

The meeting was called to order by our President Karen Jusseume. Some problems that we discussed were about the Fish & Game Dept. Some members are having real problems attaining a state license, one has had to go so far as to hire a lawyer.

An open meeting with the Fish & Game Department of Massachusetts will be held DECEMBER 13th.

WE NEED EVERYONE TO ATTEND - EVERYONE

Membership dues were discussed - only 15 out of 40 members are paying their dues...our bank account is lacking support.

We need everyone's input in this area, we are only strong in numbers, we thank those that attended, we can do more together.

The Greater New England area will be having an auction and raffle in April to raise money for the upcoming convention.. Any help would be greatly appreciated as we hope to make the upcoming convention unique.

Donations can be sent to: Mildred Payton
8 Woodlawn Rd.
• Randolph Mass 02368

AUCTION ITEMS GO TO: Ann & Albert Porges
6 Westview Dr
Stoughton, Mass. 02072

We ask other branches to help in this project..... everything will be greatly appreciated.

Submitted by Mille Payton
Secretary/Treasurer.

MEETING REPORT

It was a very hot day for Massachusetts, in more ways than one. Our turnout was fair, around 25 people. Our meeting was hosted by Albert & Ann Porges in their beautiful home. Also attending were 4 bobcats and 2 Safari hybrids to entertain us.

Karen brought the meeting to order. The first thing brought up were nominations for officers. Our current officers having been in office for two years. We will be sending out ballots in November. Then the Porges lawyer was brought in to talk to us. The Porges are having real problems with the Fish & Game in Mass. They have applied for three years for a Massachusetts license and have been refused. Well with their backs up against a wall, they hired a lawyer which cost them a fortune. The Porges do have their USDA permit. Their lawyer spoke to us for over an hour on how we as a group can help them and ourselves with the laws in Massachusetts. We formed a committee and are going to meet weekly. What we accomplish here may affect every one as the lawyer pointed out.

The meeting was adjourned and we sat down to eat. Thanks everyone for bringing such good food.

Submitted by
Mildred Payton
Secretary/Treasurer

GUILTY

A federal judge found veterinarian Daniel C. Laughlin guilty in the 1984 theft of 5 white tiger cubs from a circus.

Judge Frank J. Polozola's said that evidence that Laughlin transported, concealed and stored the rare cubs at a Livingston Parish, Louisiana animal refuge was overwhelming. He commented "It is tragic that someone with the background of Dr. Laughlin has to stand trial, but the good thing about our country is everyone has to be treated equally by the court."

Laughlin used the name Dr. Johnson on August 6, 1984 when he placed the newborn cubs in a cardboard box, attached phony documents to it and shipped the package from Seattle to New Orleans and the Feline Survival Association. Evidence in the case discounted the claim that Laughlin's biggest concern was for the safety of the cubs.

"If he did, then why didn't he take proper actions to protect the animals when he shipped them? Polozola said, "Why didn't he use incubators or blankets to keep them warm?"

It was brought out that Laughlin made two clear attempts to obtain an accomplice through statements to animal trainers Mike Burck and Robert L. Ridley, who later helped him take the cats.

Witnesses included Laughlin's wife who said he asked her to take care of the cubs. Other witnesses included circus animal trainers Sigrid Gebel Williams and David McMillan.

Laughlin was convicted on two counts of illegally transporting, concealing and storing the rare cubs, he faces a possible 20 year sentence and a \$20,000 fine.

Raymond H. Long, who operates the Exotic Feline Survival Assoc. is also on trial. He faces charges of illegally harboring the exotic cats and acting as an accessory after the fact to Laughlin's transportation of the animals.

Reprinted from World Pet Society Newsletter.



**The Snow
Leopard Trust**
by Kathleen Braden

A small group of scientists and concerned citizens met in Seattle in 1981 to discuss the survival of the beautiful, but endangered snow leopard. This large cat, native to the Himalayan Mountains of Asia, has been hunted to near extinction for its magnificent coat. Now protected through international agreements (CITES) snow leopards are being shot for illegal fur trade or by inhabitants of the mountains who encounter snow leopards in the vicinity of their livestock. Only a few thousand, at best, are living in the wild today, scattered throughout the northern India and Pakistan, Afghanistan, Mongolia, China, Bhutan and the USSR.

Not only is the cat itself very elusive and difficult to study, but it inhabits an area that is extremely sensitive politically. However, this group was determined to form a trust that would be dedicated to the welfare of not only the animal itself, but also its endangered mountain habitat.

Since that small beginning four years ago, the International Snow Leopard Trust has expanded to include members throughout North America, Europe, the USSR and Asia. Programs are underway both in the Himalayan Mountains and in zoos to preserve snow leopards and to educate the public about these cats.

The snow leopard is perhaps the most elusive of all the large cats. It inhabits a remote world of rock and snow, a world that has been very difficult for field researchers to access. Its long tail and snowshoe-like paws enable it to leap among the cliffs and crags in silent grace. Few westerners have been fortunate to see a snow leopard in the wild. George Schaller, in an expedition to Pakistan, took some of the few existing photographs of the cat in its natural habitat. Rodney Jackson, a biologist working in Nepal, has recently become the first person to live-trap snow leopards and fit them with radio collars for data collection. Jackson and his coworkers have endured tremendous hardships from the Himalayan winters, following the radio signals that bounce off mountainsides. The information collected by Jackson's team will soon provide exciting details, never before known, about snow leopard behavior in the wild.

Snow leopards in captivity have been studied by Helen Freeman, founder and President of the Snow Leopard Trust. She found that snow leopards in zoos form strong pair bonds and the male, when given the opportunity, will take an active role in cub raising. A plan for better captive breeding in North American zoos is currently being coordinated by Helen Freeman.

The Trust developed many international research programs designed to foster understanding of these rare and special cats. The Indian Mountain Project is bringing together American and Indian biologists to conduct a survey of snow leopard habitat in northern India. The Trust also sponsors research in Nepal and keeps in close contact with Soviet field biologists.

Additionally, the Trust is establishing educational programs in the U.S., India and Nepal and will be a major sponsor of the Fifth International Snow Leopard Symposium planned for October of 1986 in India.

In the future, the Trust plans to tackle the difficult issue of restocking snow leopards in their original habitat. However, programs of this nature are extraordinarily difficult with large predators and rarely succeed.

Preservation or restocking cats in the mountains requires a carefully thought out long-term program.

Although the Trust is realistic about the challenges of such a survival program, it is firm in the belief that a world without wild cats, such as the snow leopard, would be a poorer place.

The trust also publishes a newsletter, presents public lectures and offers snow leopard sweatshirts with a beautiful design by artist Gretchen Daiber. Funds that are raised go directly into programs - the staff is entirely voluntary - and contributions are tax deductible.

Membership in the Trust is open to all who share the organization's goals. The International Snow Leopard Trust, 16463 S.E. 35th St, Bellevue, Wa. 98008

Reprinted from CAT FANCY
Contributed by Bill Boyle

Hartz Mountain Announces Plans for "Furtown USA"

Judging from a recent article in FUR AGE WEEKLY the trade publication of the fur industry, Hartz Mountain Industries not only endorses the killing of animals for fur, but infact subsidizes it.

In the June article, Hartz Mountain Industries, the company that produces "everything good for your pet" made public its intentions to construct a luxurious 400,000 square foot "fur center". The proposed complex to be located in the New Jersey Meadowlands, will offer wholesalers and manufacturers of fur garments, posh showrooms, modern office facilities and spacious manufacturing areas.

How can a major pet care supplier subsidize the slaughter of animals on such a grand scale? As both activists and consumers, be sure to contact Hartz Mountain and voice your opposition to the corporations involvement in the exploitative venture. Explain you do not wish to subsidize the slaughter of animals captured for their fur. Furtown USA is in its formative stages and letter writers may be able to help stop construction now.

Write to:

Mr. David D. Lovits, Pres.
Hartz Mountain Industries
700 S. 4th St.
Harrison, N.J. 07029

Condensed from American Humane Society
Contributed by Jean Hamill

LIONS IN LOVE

A crowd at an English circus waited patiently for about 30 minutes for the show's lions to perform in the center ring. Circust attendants tried to separate romantic Ronnie & Sheba while the Ringmaster announced the delay in the program was "due to circumstances beyond our control".

Eventually the lions were headed into the arena and the show went on. Circus patrons said they didn't mind and in fact thought it was amusing.

Henceforth, the circus plans to keep the lions in separate cages.

Reprinted from World Pet Society Newsletter.

Printing By **PRINTRIGHT** Oregon and Washington

Panther is killed in Florida

(AP) One of Florida's few remaining panthers was run over and killed as it tried to cross a road in an area where efforts are under way to curb the destruction of rare wildlife by speeding vehicles, authorities said.

The killing south of Alligator Alley in southwest Florida comes as a blow to the state panther population which numbers less than 30, Game & Fresh Water Fish Commission spokesman Lt. Biff Lampton said.

At one time, wildlife officials had collared 27 cats with radio devices. Since 1972, 10 of them have died, Lampton said, but he added that the cats are reproducing.

"It's a viable population" he said, "How many...we don't know".

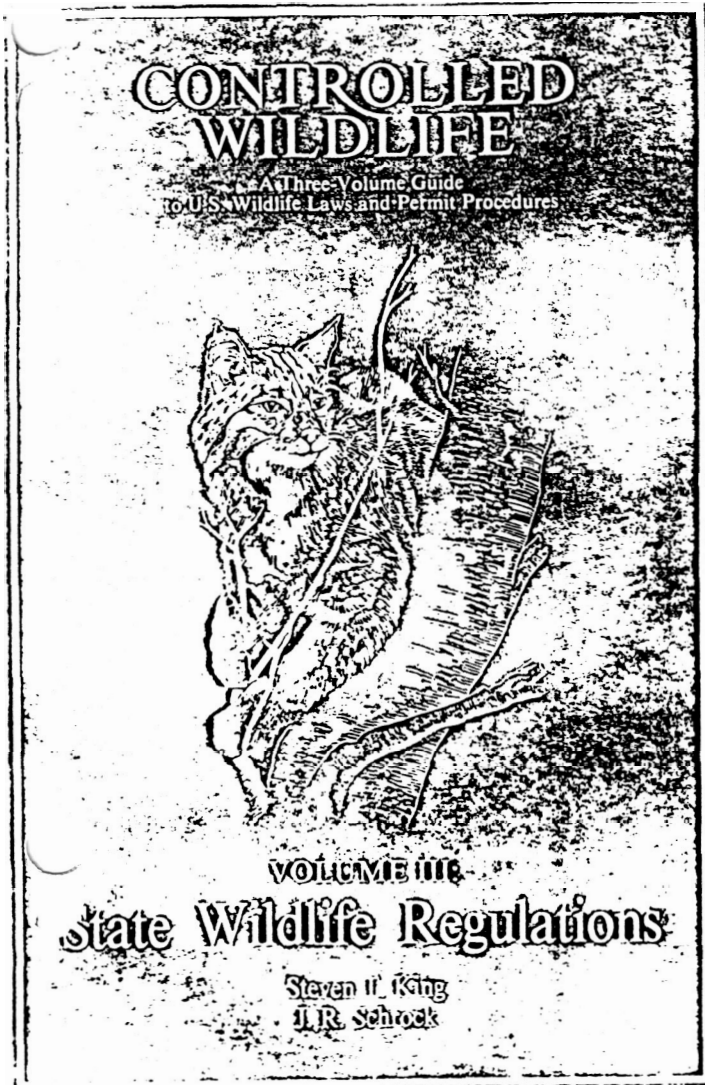
The carcass was discovered by a couple of fishermen on a desolate stretch of road near Naples. Lampton said the mature, 120 pound male was wearing a radio collar that wildlife officials placed on it in 1984 in the central Everglades.

South Florida's increasing development has continued to infringe on the animal's habitat, while cars have killed many of the rare cats which live mainly in Big Cypress National Park, Everglades National Park and the Fackhatchee Strand.

Gov. Bob Graham in 1983 began the Save our Everglades initiative, which has resulted in a state program to spend about \$10.5 million to elevate Alligator Alley at known panther crossing areas.

An additional 23 crossings will be part of a 76 mile \$383 million state and federal project to extend Interstate 75 along Alligator alley.

The Florida Panther, no med the state animal in 1982, is a subspecies of the eastern cougar which is believed to have migrated from the hills of West Virginia to escape man's encroachment on its territory.



JUST ARRIVED

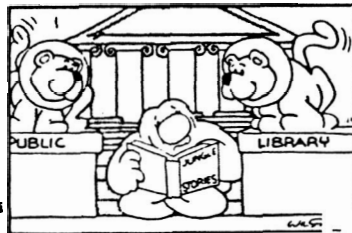
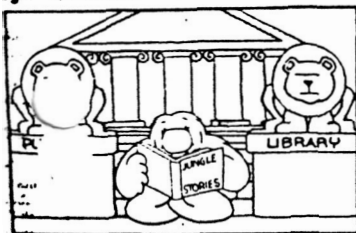
The third volume in the series, covers State regulations covering all wildlife. Volumes I & II cover Federally Controlled Species and Federal Permit Procedures.

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The purchase of these volumes was made possible by donations from Shirley Treanor and Danny Treanor.

Jg! Tom Wilson Jr



OBITUARY

JACK PARISH, July 30, 1916-December 3, 1986

Out of the rugged, yet gentle and beautiful part of the Southwest section of our nation stepped a man who reflected the nature of the land from which he drew his strength. A rugged, yet gentle individual who was active in many projects of worthwhile value, many in which he was a pioneer member, including the SouthWestern Branch of LIOC which was prompted by his deep love of nature and nature's beautiful creatures.

In the state of Oklahoma he worked diligently for wildlife protection, long before it was popular to do so in other parts of our nation. Among just a few of his accomplishments can be listed: A true Christian, Flight Instructor in the U.S. Air Force during WWII, Establishment of the Tishomingo Oklahoma Airport, A Colonel in the Confederate Air Force (an organization that restores vintage WW II aircraft and performs in air shows all over the U.S.) President of the Parish Fixture Company, Mayor of Tishomingo, Oklahoma, serving multiple terms and many wildlife conservation projects.

One of his great loves was raising and breeding exotic cats. He has expressed many times that it was his desire to put back into nature and God's wonderful world more than he took from it. He and his charming wife, Mary and their family have been supportive to the Southwestern Branch of LIOC since its establishment.

It can truly be said that our part of the world is a better place and our lives have benefited because Jack Parish passed this way.

Roger Harmon
Life Director

↓ Cougar slaughter planned ↓

A prelude to its planned resumption of the sport of cougar hunting in California this year, the Fish & Game Dept is about to issue a scientific permit to kill every cougar in the North Kings area in order to weigh the impact of such slaughter might have on fawn survival in that area.

WRIT E: California Fish & Game Dept.
Jack Parnell, Director
Sacramento, CA.

Further- California representative Norman Waters, has authored a bill (AB 947) which would once again make the cougar a game animal-open to hunting. Byron Sher, says that some "sell this as a management plan, but what it comes down to is legitimizing trophy hunting".

Condensed from the San Jose Mercury
Contributed by Jean Townes



ACTION ALERT



DEAR GOD
HOW COME YOU
DIDN'T INVENT ANY
NEW ANIMALS LATELY?
WE STILL HAVE JUST
ALL THE OLD ONES

JOHNNY



BUT DO WE ???

HINTS FROM HELOISE

Get to the stain as quickly as possible, blotting up as much as you can with paper towels or a clean white absorbent material. Then directly apply a little white distilled vinegar to the stain to neutralize the urine. The vinegar also helps stop discoloration of the carpet. You don't want the liquid to go through to the carpet backing, so blot up the vinegar right away. The next step is to mix two tablespoons of mild dishwashing liquid to one cup water and apply this sparingly to the stain. Blot up any excess. Rinse this area then with clean water to remove all detergent. Again, blot up excess, taking an old towel, lay it over the damp spot and then walk over it to draw up as much of the liquid as possible.

Contributed by Ethel Hauser

APRIL

BY Kathleen Metzner

It's almost a year since my baby "April", a Chinese Leopard had to be put to sleep. It wasn't fair, she was only 3½ months old and didn't really get a chance at life. But those were some of the happiest times of my life, even though it still hurts to talk of her. I'll never forget her watching from the window when I had to leave without her and her cute little face at the window when I would get home.

Believe me, I know what it's like to come home to a cat-less house! It really hurts.

April was three weeks old when I got her. I'll never forget the first day I got her home. It filled a space which had been empty a long time. April loved her bottle and would just go crazy, screaming at my feet while I heated her formula. One day, when she was about 5 weeks old, I was feeding her and noticed her eyes flicker back and forth rapidly for a few seconds. It scared me to death. I called the breeder and she said that April had had an ear infection and that maybe it was recurring. I took her to the vet the next day, but nothing was wrong. She seemed in perfect health.

Two weeks later she did it again only this time for a longer time and turned a few frantic circles. I decided to try another vet and made an appointment for that afternoon. I had to run to the store and when I came home I had a feeling something was terribly wrong....April wasn't at the window to greet me. I found her lying on the floor in what seemed to be a deep, deep sleep, but I couldn't wake her. I rushed to the vet as fast as I could. The vet examined her and told me that the left side of her face had been broken. I couldn't figure out how it could have happened. The vet told me he'd keep her overnight on IV's but he didn't think she'd make it. Needless to say I was in shock.

The next morning I called and the vet said there had been no change, but I could take her home as long as I could tube feed her every 4 hours, and roll her from one side to the other.

The next 4 weeks were a horror for me. April's recovery was very slow. None of the vets could find anything which might have caused the rapid eye movement, or the turning in circles. But there had to be a reason so I called several different vets who specialized in treating exotics. I finally talked with a zoo vet who said that a couple of years back he had lost a cat to epilepsy. It apparently had been caused by in-breeding. Somehow they are born with inner-ear problems or the epilepsy manifests itself first in that manner. He stated his cat didn't develop overt symptoms until about a year of age and then was kept on medication the rest of her life. He finally decided to run some tests and during one of her seizures she had died. To me it sounded like terrible pain for the animal. Anyway, I asked this vet if he'd take a look at April, who was now up and walking after 4 weeks.

You'll never believe what this man told me. "No, I don't believe people should have exotic animals as pets." I had thought vets, like human doctors took some kind of oath. Not this one. Anyway, I called my vet and told him what I'd found out. He said he'd check and find out what kind of drugs to prescribe and we could start April on medication.

Four weeks after April had had any type of seizure I woke up to find her in her box, exhausted, foaming at the mouth and looking terrified. I called my vet at 3:00 AM and he told me to increase her medication. The next day was Sunday. April continued having seizures, it was a nightmare for both of us. A call to my vet and we went to see him. He was startled to see how exhausted she was-she could barely stand. His only recommendation was to keep increasing the medication until it just didn't work any more.

I took April outside and sat in the grass with her. Her normal curiosity in her surroundings was gone-she just wanted to lean against me. Then I decided: it was unfair for her to be kept doped....she wasn't enjoying life. I knew she suffered and preferred for her to leave me if she must in peace.

I took her back inside and my little baby went to sleep forever. It was very hard for me to do that but I do feel now as then, that it was the best thing. She'll be missed even though she shared so little time with us.

Necrology

Bill Boyle writes: Choloé, my male clouded leopard recently killed Camille during breeding. I wasn't when it happened, but I did have an autopsy done and it showed that he grabbed her by the throat and those big fangs punctured her windpipe. She strangled to death. I was sick for weeks about it, but feel better now that I've gotten another pair. Hopefully in another couple of years this pair will breed. I just didn't feel comfortable about raising another female for Choloé and will probably just keep him as a personal pet.



Books

LIONS, AND TIGERS AND BEARS

By Jefferson G. Ulmer and Susan Gower

Over 700 zoos, nature centers, visitor farms, marine displays and other live animal exhibits in the U.S. and Canada are listed in this new book. Listings include address, phone numbers, hours, fees, highlights of the collections as well as educational programs and facilities.

The book consists of 256 pages and is priced at \$20. from Garland Publishing Co., 136 Madison Ave., N.Y. N.Y 10016

Season's Greetings



Mara lions keep staff caged up

Reprinted from World Pet Society Newsletter

Guests at Keekorok Lodge in South Africa almost went without dinner one evening when waiters and kitchen staff did not report on duty in time.

At first the duty manager thought the wall clock in the empty dining room was incorrect. After confirming the time, he wondered if the staff was staging a strike.

On further investigation however, it was discovered that the staff had been sealed off from the camp by a pride of lions who were eying some wildebeeste grazing near the camp.

On discovering the real reason behind the missing staff, the Manager announced the news to guests who forgot their hunger and rushed towards the area with cameras in hand.

A young Masai waiter, unconcerned about the lions, made his way unarmed through the back gate and was the only one ready to serve dinner.

By this time the guests had reached the staff quarters and were busy taking pictures of the menacing pride. But the photo session was shortened by the arrival of a Game Warden who quickly disbursed the pride in his Land Rover.

Readers Write



WE NEED YOUR HELP

Dear Club Members:

I am at my breaking point with Nikka, our four month old ocelot. He has been handled, hand fed since he was two weeks old and now all he wants to do is bite on me. On me it's not too bad but when it someone else, it gets pretty bad. And he loves people so.

His parents are no problem but this little dickens is something else. Even spanking has proved useless and when that fails, I confine him to his pen, but that doesn't impress him either. I've raised leopards, lions and cougars and have never encountered anything this bad.

Could someone tell us what else we could try to do or is it just a phase he's going through. It seems the smaller the cat the more they like to bite. He doesn't use his claws so I don't have that trouble. I love him so much, but I can't seem to make him stop biting. Could somebody please help me.

Pat Wille
Rt 2, Box 292
Brandon, Wis 53919

PARDON OUR PROGRESS

Bill Boyle's generous donation of an IMB Selectric typewriter has enabled us to vary our type. Unfortunately, the only way to see how it looks in the newsletter is to experiment. Please bear with us as we do this. As always, your comments are wanted, and appreciated.



DUR-A-GARD Epoxy Finish

Dur-A-Gard may be applied with roller or brush, but it's no paint! Dur-A-Gard's epoxy finish is lustrous and long lasting. In fact one coat of Dur-A-Gard will last longer than ten coats of latex paint! Dur-A-Gard not only wears well, it resists chemicals, acids, solvents, oils, and harsh detergents . . . retains its waterproof, easy-to-clean, glossy finish in any one of 16

appealing colors. Dur-A-Gard adheres to wood and metal, and it's a "natural" for concrete floors.

It's easy to apply . . . merely combine Dur-A-Gard's two components and spread with roller or brush. A non-slip texture may be obtained by adding a suitable grit during application. Simple instructions are included in every order.

FOR BEST RESULTS:

The surface to be covered must be bondable, dry, and clean. The temperature during application, and for several hours thereafter, must be over 50°F. One coat may be satisfactory for many areas, but two coats are recommended for more uniform color and

greater durability. On average concrete apply the first coat at the rate of about 250 square feet per gallon and the second coat at 300 square feet per gallon. Dur-A-Gard may be applied as thickly as desired and can be used to fill and level a rough surface.

DUR-A-GARD RESISTANCE TO CHEMICALS

REAGENT	45 Min.	24 Hrs.	7 Days
Acetone	E	NR	NR
Acetic Acid (10%)	E	E	G
Acetic Acid Glacial (100%)	E	NR	NR
Ammonium Hydroxide (28%)	E	G*	NR*
Benzene	E	E	E
Chloroform	E	G*	NR*
Calcium Chloride (30%)	E	E	E
Clorox (Full Strength)	E	G*	NR*
Coca Cola	E	E	G*
Cottage Cheese	E	E	E
Chromic Acid (10%)	E	G	NR
Citric Acid (30%)	E	G*	NR*
Ethyl Alcohol (95%)	E	G*	NR
Ethylene Glycol	E	G	NR
Ethylene Dichloride (10%)	E	G	G
Ferric Chloride (10%)	E	E	G*
Gasoline	E	E	E
Glycerine	E	E	E
Hydrogen Peroxide (6%)	E	G	NR
Hydrochloric Acid (20%)	E	E	G
Hydrofluoric Acid (10%)	E	NR	NR
Hydraulic Fluid	E	E	E
Isopropyl Alcohol	E	E	E
Lactic Acid (20%)	E	E	G*
Methyl Isobutyl Ketone	E	E	E
Methylene Chloride	E	NR	NR
Mineral Spirits	E	E	E
Motor Oil	E	E	E
Mustard	E	G*	G
Nitric Acid (10%)	E	G*	NR*
Phosphoric Acid (85%)	E	E	E
Salt Water	E	E	E
Spic and Span (30%)	E	E	E
Syrup	E	E	E
Sulfuric Acid (30%)	E	E	E
Sodium Hydroxide (30%)	E	G*	G
Silver Nitrate (10%)	E	G*	G
Tide Detergent	E	E	E
Trichloroethylene	E	G	NR
Tri-sodium-phosphate	E	E	E
Tuene	E	E	E
urea (Synthetic-6.6% urea)	E	E	G

Legend: E—Excellent, no chemical deterioration.
G—Good, sample discolored but no chemical deterioration.
NR—Not Recommended, sample deteriorated. Contact Dur-A-Gard to ascertain if a more chemical resistant formulation is available.

*Resistance to attack by this chemical can be improved by using Dur-A-Gard #1 or #2 as a basecoat.

Dur-A-Gard Physical Properties

HARDNESS (Shore D).....	ASTM D-1706	70-80
WATER ABSORPTION.....	ASTM D-543	0.37% after 7 days immersion
LINEAR SHRINKAGE.....	ERF 12-64	.002" per inch
TENSILE STRENGTH.....	ASTM D-638	3,000 psi minimum
FLEXURAL STRENGTH.....	ASTM D-790	4,000 psi minimum
COMPRESSIVE STRENGTH.....	ASTM D-695	16,000 psi
IZOD IMPACT (ft. lb./in. notch).....	ASTM D-256	0.50
BOND STRENGTH TO CONCRETE.....	ACI-403	Concrete fails before loss of bond
ULTIMATE ELONGATION.....	ASTM D-638	20%
HEAT DEFLECTION TEMPERATURE.....	ASTM D-790	No slip or flow at 242°F.
FUNGUS & BACTERIA RESISTANCE.....	MIL-F-52505	Will not support growth of fungus & bacteria
SALT SPRAY RESISTANCE, 25% solution @ 90°F.....	MIL-F-52505	No effect after 100 hrs.
THERMAL SHOCK.....	MIL-F-52505	No cracking or loss of adhesion
ABRASION RESISTANCE, CS-17 Wheels(2) Wgt. Loss, 1000 gr. load, 1000 cycles.....		.035 Gm Loss
U.V. RESISTANCE.....	MIL-F-52505	No chalking or loss of adhesion
TOXICITY.....		Non-toxic
POT LIFE.....		23 min. or 45 min.

CAT PROOF !!

Great for walls too!

DUR-A-GUARD EPOXY COATING is available in 15 colors: White, Black, Medium Gray, Dark Green, Light Green, Dark Blue, Light Blue, Dark Brown, Cocoa Brown, Tile Red, Canyon red, Yellow Ochre, Bright Yellow and Light Yellow.

Order sufficient amount of a color to finish the entire job. Slight batch-to-batch color variations may occur.

AVAILABLE TO LIOC MEMBERS AT DEALER COST

➡ THAT'S A 40% DISCOUNT! ⬅

UNIT SIZE	SHIPPING WEIGHT	LIOC PRICE
1½ gallon	18 lbs	79.06
3 gallon	34 lbs	149.33
15 gallon	164 lbs	701.81

Normal coverage - floors- 250 square feet per gallon per coat. Walls- 350 square feet per gallon per coat.

Thicker coatings may be appropriate for heavy traffic areas.

DUR-A-GUARD is USDA and OSHA approved.

ORDER FROM: Great Eastern Distributors
3071 Peachtree Rd. N.E. Suite 112
Atlanta, Georgia 30305