

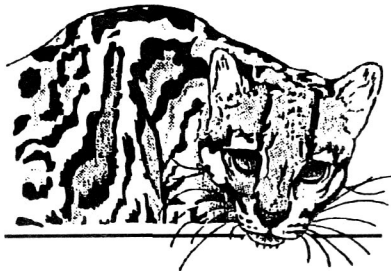
# NEWSLETTER

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This handsome guy lives with Oregon member Donna Amos. See more on the clouded leopard on Page 5



# 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 with international membership, devoted to the welfare of exotic felines. The purpose of this newsletter is to present information about exotic feline conservation, management and ownership to our members.

The material printed in this newsletter is contributed by our members and reflects the point of view of the author but does not necessarily represent the point of view of the organization. LIOC ESCF, Inc.'s statement of intent is contained in our by-laws, a copy of which can be requested from the Secretary. Reproduction of the material in this newsletter may not be made without the written permission of the original copyright owners and/or copyright owner LIOC.

Persons interested in joining LIOC should contact the Term Director in charge of Member Services.

Since the Newsletter consists primarily of articles, studies, photographs and artwork contributed by our members, we encourage all members to submit material whenever possible. Articles concerning exotic felines are preferred and gladly accepted. Articles involving other related subjects will also be considered. Letters and responses to articles may be included in the Readers Write column. Please submit all newsletter material to the Managing Editor.

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## Captive Felines In Asia

*by Mark Norris*

This past fall I had the opportunity to travel to several Asian countries, including Nepal, Thailand, Hong Kong and China where I visited numerous zoos and wildlife reserves. Though the purpose of my visits were not directly related to the study of exotic felines, I did observe them as much as possible.

My concluding observations are that exotic felines are still one of the most severely neglected and mistreated animals exhibited in Asian zoos. With major steps being taken toward natural exhibits and enrichment for captive felines in the West, it was a major shock to see the conditions which the majority of felines are still kept under in Eastern zoos.

Most notable was the size and sparseness of the exhibits. Virtually all the animals I saw were kept in concrete "cell-block", bared cages, many only about twice the length of the animal. I remember seeing an enormous, magnificent, Bengal tiger in a cage no more than 10 feet square. The poor animal was barely able to turn around. Very few of these exhibits featured shelves or climbing apparatuses, forcing the animals to lie on concrete which was often wet continuously. As a result, many animals exhibited extreme abnormal behavior.

Of course, it is not only felines which are kept in far less than ideal conditions. There were many examples of extremely sub-standard care involving bird and mammal species, particularly primates, however,



Mother Chinese Leopard & cubs in Chengdu Zoo

the mismangement of the felines seemed to be the most consistent.

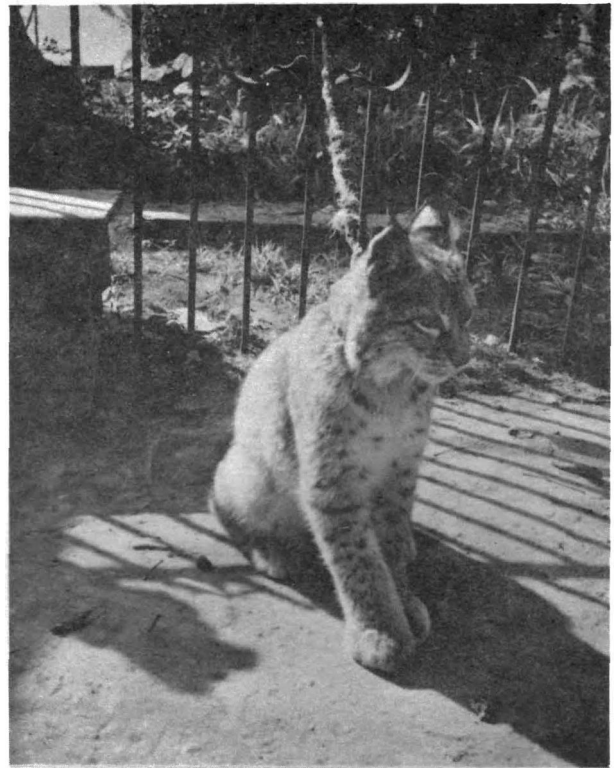
The problems seem to stem from roots which are two fold: one, many Eastern zoos exist on extremely limited budgets and can simply not afford the large enclosures and extensive care that exotic felines require. Secondly, there is still a great deal of ignorance and outright fear of felines in Asia and often even those directly responsible for their care are ignorant of the animals' true needs and behavior in the wild. It is a vicious circle because most local zoos are doing nothing to change people's attitudes

towards these animals. And, in turn, the local people accept and even expect these animals to be kept in this fashion. This further fuels the local people's lack of interest in preserving these animals in their natural environment.

With some of the most endangered species of wild felines in the world being found on the Asian continent, the extreme ignorance of the local people appears to be the species' greatest threat and unfortunately, not one which is likely to change drastically in the near future.



Author Mark Norris and Kantha, a four month-old lynx native to the Himalyas. The animal's mother was killed by villagers who were raising her when police confiscated her and brought her to the zoo in Kathmandu, where she was raised by the zoo's vet. Unlike most of the captive felines I saw, she was in excellent condition. She was named "Kantha" meaning "littleest one in the Family" in Nepalese.



# The Clouded Leopard

## Part II

*By Ron Eldridge, BVSc*

### REPRODUCTIVE HABITS

Very little is known about the elusive and shy clouded leopard's reproductive habits in the wild. Most of what we know and write about is data derived from the captive-born populations.

Sexual maturity occurs at about five years of age. When the female is in estrus much vocalizing takes place and this is called "prusten". Because of the size disparity between the male and the female, males avoid eye contact with the female. Males usually weigh anywhere from 20 to 25 pounds more than the females. Eye contact from the male would be threatening to the female.

### PROBLEMS OBSERVED IN CAPTIVE POPULATIONS

Males have the longest canine teeth of any feline in relation to their size. These teeth are lethal weapons and during mating, much ceremonial biting takes place by the male. The net effect is that males often kill their mates during reproductive efforts. No data exists concerning sexual incompatibility in the wild.

### CAPTIVE BREEDING PROGRAMS

The high risks faced by this animal in their native habitats, coupled with difficulties

experienced in captive breeding have impelled us to attempt alternative methods of reproduction. The two most current methods are:

**INTRAUTERINE ARTIFICIAL INSEMINATION (AI):** Dr. Howard from the National Zoo's NOAHS Center, along with the Nashville Zoo used the AI procedure on a female clouded leopard and after successful gestation twin cubs were born. Today they are still healthy and enjoying life in the Nashville Zoo, which by the way, has the largest collection of clouded leopards in North America.

### CAPTIVE ATMOSPHERE TO ELIMINATE STRESS:

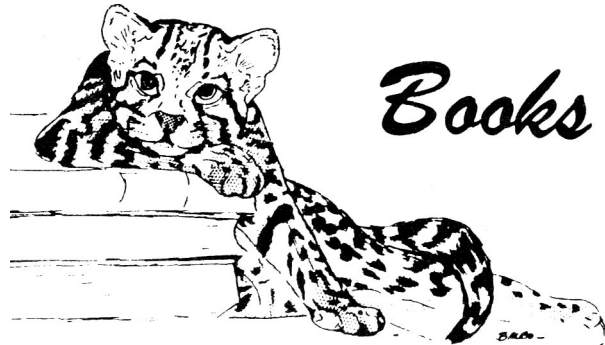
Clouded leopards are naturally nervous cats, as are most of the smaller felines. The Nashville Zoo has a program to acclimate the leopard cubs to captivity by handling the animals by qualified technicians. This helps the cub to feel comfortable when being viewed by the public, moved by keepers and being treated by veterinarians. This method has eliminated much of the stress in captivity and has produced good results in captive breeding programs at the Nashville Zoo.

The "Fatal Attraction" of this species can be overcome with technology and innovative zookeeping.

Part III will discuss "Man and the Clouded Leopard".

# The Jaguar

*By Rafael Hoogesteijn and  
Edgardo Mondolfi*



Now comes "The Jaguar" by Rafael Hoogesteijn, a cattle vet involved with management of ranches in the llanos plains of Venezuela, and Edgardo Mondolfi, a distinguished academic and research scientist, undoubtedly Venezuela's leading experts on the jaguar. Their book could well be called "The Complete Book of the Jaguar". There is certainly no competitor for the title. While understandably basing their report on the jaguar in their home country, the authors range far and wide to draw together the best information possible. They draw too on the expertise of researchers of the big cats in Africa and South Asia in order to compare big cat behavior.

With lavish illustrations, which will lead the reader to understand the difficulty of seeing a wild jaguar, they cover its biology, habitats, distribution, taxonomy, behavior, feeding ecology, reproduction and diseases. Those chapters set the scene for a review of the status of the jaguar today and the problems of conservation.

All cats are predators, of course, and are opportunistic in the prey they take. Inevitably, there is a clash with human interests when they attack livestock, leading to almost universal persecution. The big cats, especially, incur human ire, while at the same time being admired and respected. The

experience of Hoogesteijn and Mondolfi leads them to declare that jaguar losses are less than livestock owners complain. Many cattle are lost to disease and to theft, but the jaguar gets the blame. Much could be done to reduce predation to what should be an acceptable level.

Most jaguars are not cattle killers, but, ironically as the authors note, the hunters often turn them into problem animals by wounding them so that they are handicapped in taking their normal prey. Hoogesteijn and Mondolfi found that 51% of the skulls of known cattle killers had old injuries.

What of "man-eating jaguars"? In an extensive survey of reports of jaguar attacks on people, the authors conclude: "Although there are numerous cases of attacks on man, the overwhelming majority are due to hunting accidents in which the feline was wounded or cornered by dogs."

"Unprovoked" jaguar attacks, which occurred largely before 1950, when jaguars were plentiful and firearms scarce, were due to females with cubs or adult jaguars with fresh kills.

The authors note that many people recount having been followed by a jaguar in

jungle areas, but say that this is more out of curiosity than predatory interest. Old males, resenting intrusion in their territories, will follow people until they leave the limits, they add.

Hoogesteijn and Mondolfi are deeply concerned about the future of the jaguar. Maps graphically illustrate its shrinking range: once found as far north as Arizona and New Mexico, and deep into Argentina in the South, the jaguar has retreated so that the Amazonian basin is its last stronghold, leaving scattered, fragmented populations from southern Mexico through the isthmus to Columbia and some remnants in coastal regions of southeastern Brazil.

"The forecast by the entire scientific community for the jaguar's future is unfavorable. The only way to conserve this carnivore, maximum exponent of our fauna, is through designation of large areas in which it is totally protected from loss of habitat and natural prey, as well as from continuous confrontation with man's commercial interests," the authors declare. But they point out that there is no really effective

national parks system in South America to protect representative populations of cats, especially jaguars. They also stress the importance of the Amazon region for human welfare, and deplore the continual devastation of forests and natural resources.

The authors confront the controversial issue of whether sport hunting can contribute to conservation with a broad review of the background and the views of scientists. They point to the usual example of controlled leopard hunting in parts of Africa, but state: "In our country there is no tradition of professional hunters and organized sport hunting on a level with associations existing in Africa, Europe and the USA, which undoubtedly need and desire to have game species conserved and, together with ranchers and public and private bodies, take all practical measures to protect species and see that they multiply. Some Latin American countries, and even Latin countries in Europe, such as Italy and Spain have weak conservation traditions and mental attitudes that view nature, not as an ally to be enjoyed, but as an enemy to be destroyed."

From IUCN Cat News

## Cars Responsible For Cougars' Demise

A five year, \$700,000. study of 32 cougars killed in the Santa Ana mountains of California has learned that cars are the leading cause of death, killing 8 out of the 25 who died. The study was done by Orange County and the Department of Fish & Game.

OOPS!!....

We failed to give credit to Nanette McGann, for the great photos and story of TJ & KIRA which ran in the last Newsletter - Sorry Nan, we must have been asleep.



## MEMBERSHIP/GUEST MEETING February 20, 1994



EXOTIC FELINE EDUCATIONAL SOCIETY

Larry opened the meeting by welcoming the 60 persons in attendance. He introduced the new 1994 officers and recognized the volunteer appointees.

Barbara Wilton gave a brief history of L.I.O.C. and our affiliation with this organization. She provided newsletters and encouraged the guests attending today's meeting to help themselves to take a copy home.

Sharon welcomed the following new members:

<i>Bob &amp; Suzette Armstrong</i>	<i>Cheryl Fielden</i>	<i>Gayle Heon</i>
<i>Ann Beeman</i>	<i>Shirley Gasper</i>	<i>Robyn &amp; Shane Nielson</i>
<i>Joan DeMuth</i>	<i>Lee Giles</i>	<i>Elsie Park</i>
<i>Pat DeMuth</i>		

The 1994 L.I.O.C. convention update was given by Sharon, who encouraged everyone to mark their calendars for August 10-14th. This convention will be organized by EFES member Kelly Jean Buckley and should be filled with fun and information.

### UPCOMING FUND-RAISERS

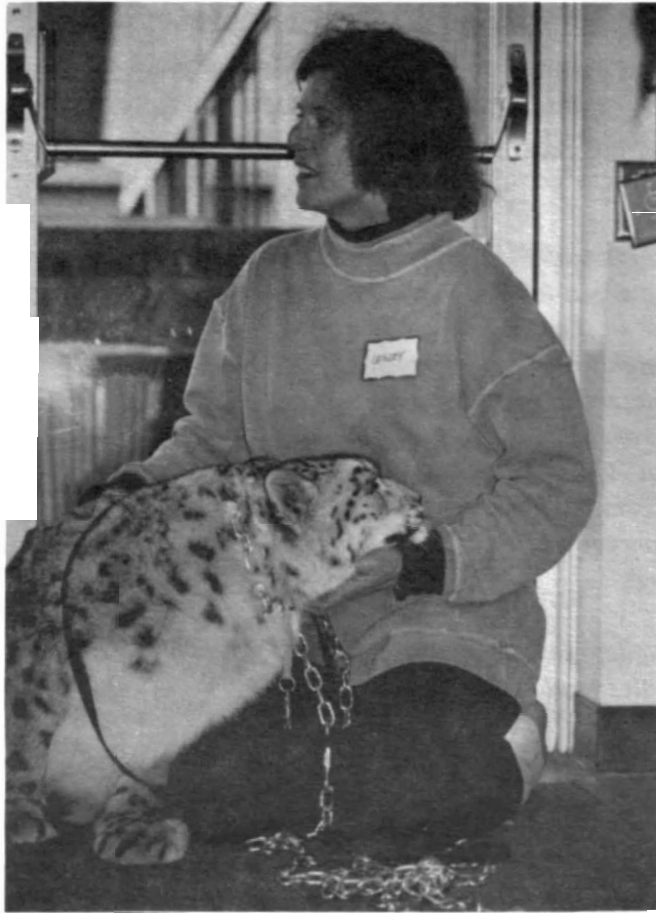
Larry asked for a show of hands from those who would be participating in the wood cutting project scheduled for March 19th. The guests were advised that there are a number of ways to help with this fund-raiser, i.e., collecting orders, cutting wood, carrying and loading, and transporting the deliveries or assisting the EFES cooks with the great outdoor feast being planned - see enclosed flyer for details.

*Rod Black has volunteered* to assemble catch poles as a fund-raiser. Watch for details in the April meeting minutes which will include price and availability..

### PROJECT UPDATE - ADOPT A HIGHWAY

We are now in the final phase of receiving approval of a 2-mile section of Oregon highway. Liability waivers required by the state must be signed by every participant before the club application will be processed. Larry circulated forms to be signed and emphasized that this project will give EFES public exposure as the club name would be posted on a sign at the beginning and end of the 2-mile section of assigned highway. This is a positive way of promoting EFES.

EFES member Lesley Day was our featured guest: She exhibited Rose, her two year old Snow Leopard..



Lesley Day with  
Snow Leopard, Rose.

Don & Arla Hertz  
"GOOD GUY AWAED"



- Lesley gave a brief educational talk on this species and answered questions from the members and guests in attendance. Those with cameras were encouraged to take photographs. For some this may have been a unique opportunity to photograph a Snow Leopard who was not in an enclosure.

#### EDUCATIONAL PRESENTATIONS

- *Ethel Hauser gave a speech on the dangers of FIP (Feline Infectious Peritonitis). This subject matter was well received by those in attendance because this pertains to domestics as well as exotic cats. Furthermore, since most members have more than one cat, this subject had significant meaning since FIP is highly contagious disease. Flyers were available that provided detailed information regarding this common disease.*
- *Sharon Roe gave a brief introduction of NAPCC (National Animal Poison Control Center) This center was established in 1978 and is located at the College of Veterinarian Medicine, University of Illinois, and is staffed by licensed veterinarians and board certified vet toxicologists. They provide assistance, on an emergency basis, for animals that have been potentially exposed to or have ingested a poisonous plant or substance. A handout was made available.*
- *Ken Hatfield summarized the pending legislation regarding the USFWS Captive Bred Wildlife Regulation. The proposed rules would prohibit individuals from using educational purposes as a means for obtaining a license for endangered animals. Additional rules would prohibit individuals from obtaining permits to breed endangered species. Ken encouraged all members to write letters to their congressmen and officers at the U.S. Fish & Wildlife Service voicing objection to the proposed change in the regulations. Standing alone, this does not seem to be a significant issue in that most of us do not own endangered species, however, as more and more rules are enacted or amended, legislation could jeopardize our privilege to own exotic animals. Therefore, it is incumbent upon all of us to object to rule changes that adversely impact us as breeders and owners. Ken and the officers of EFES encourage a proactive stance on this issue.*

#### **\*\*\* GOOD GUY AWARD \*\*\***

**Jan. & Feb. Good Guy Award was presented to:**

***Don & Arla Hertz***

**for their contributions, active participation, and support of EFES**

With such a good turnout of members and guests, we also had a larger than usual display of felines. Bob Griffiths conducted a very successful raffle and dollar game. The meeting was adjourned and everyone lingered to visit and enjoy the snacks.

Respectfully submitted,



---

Sharon L. Roe  
Secretary



The March meeting was held in the lovely home of Jackie Sinnott, who shares it with her 4 ocelots and 2 bobcat/lynx.

We all enjoyed first, visiting with the cats, then checking out her security. Jackie's house is really a cat's paradise, devoted to the enjoyment and welfare of the cats. It is not only escape-proof, but beautiful.

Jerry Boyle called the meeting to order and after introductions were made, asked about problems. Jackie talked about problems with Brandy her bobcat. He has been having some kidney problems and is under the care of Dr. Del Orchard and on a special diet. He does seem to be doing a little better. We are all wishing him well. We next discussed the food problem we are having. The variety of prices and what is available is becoming a real problem. The membership will be polled on what they feed, the amount and the cost. Hopefully, we can compile the information and possibly buy in large amounts at a savings for everyone.

## March Meeting Report

Gayle announced she had the Jan/Feb Newsletter that will be mailed out in a few days, and the call for nominations for the 95/96 officers were in this issue. She encouraged everyone interested in holding office on the National level to run. We also reminded everyone to vote at the time the ballots come out later in the year.

Next, Gayle passed out a Convention brochure that will be in the Newsletter which explains some of the activities and about the resort where it is held. We talked about what we could donate to the Convention and came up with a couple of ideas, and did decide on one of them.

Jerry just returned from visiting Central America and while he was there did see an ocelot and margay in the wild. What a thrill!

It was brought to our attention that it was time to renew the LIOC membership for our vet friends. We will give a membership to Dr. Randall Haveman, Dr. Soderholm and Dr. Del Orchards. It is our way of thanking them for the fantastic job they do in treating our animals. Thanks guys.

Gayle reported she has heard from Oregon Fish and Game and they are going to start on the next phase of their overall plan for Oregon wildlife. Last year they worked on regulations on deer and elk. Many of our members participated in the meetings for comments. We'll try to keep everyone informed.

Gayle Schaecher



February 16, 1994

Our February meeting was held at the home of Alan Rigerman on February 5. We had a nice turnout - 19 people and eight cats. Vernon Yates and his helper Wayne came with his tiger and lion, Kim Beaudry & Richard Half brought Yo-Yo, their Canadian lynx, Pam Reily and son Brendon brought Rio, their 5 month S.A. cougar, Nanette McGann brought T.J. her serval, Jean Hatfield brought her baby serval, Sandy & Dave Cassalia brought Magnum cougar. Also attending were Debbie & Tom Misotti, Diane Buchanan, Pete Ferguson, Dan & Heather from Frank Weed's, Mary Roberts & John Mercer, and of course, our host, Alan Rigerman.

Everyone enjoyed looking at Alan's reptiles - snakes, lizards, tortoises. We voted on our by-laws and also decided to hold the April meeting at Pam & Brian Riley's house near the end of April. Canadian members Scarlet and Jeff Bellingham will be in central Florida at that time and would like to come to our meeting. I am looking forward to meeting them. Anyway, the meeting was filled with loads of cat talk, as usual.

On a recent visit to Ellen & Frank Weed's house they told me they would host a meeting at their compound. I will have to get back to them as I am sure everyone would love to see their cougars, Tig the tiger and other animals.

Our condolences to Kim Beaudry who lost her F1 bengal recently - she believes it jumped out her window, or possibly someone stole him, as the screen was ripped and the cat gone when she awoke.

Congratulations to Pam & Brian Riley on their new acquisition of "Rio", a south american cougar.

Birth announcement: Pam Riley had four jungle cat hybrids born (Nile cats) from her egyptian mau female, Alex, and my male melanistic jungle cat, Sidney.

Upcoming births: Sandy Cassalia's golden jungle, Sasha, is hopefully expecting near the end of March from Sidney jungle cat. Pam Riley's tabby, Noogie, is expecting again from Sidney jungle cat.

Final announcement: your chapter's president, Dave, and secretary, Sandy, are expecting a child of their own towards the end of the year. We just recently found out and are thrilled, as this will be our first ! After raising all types of baby animals for 10 years, we are sure this will be a very different experience, yet one we are looking forward to more than ever !

## Eastern Cougar Conference

A conference on the Eastern cougar will be held at Cannon University, Erie, Pennsylvania June 3-5, 1994. The conference is being organized and sponsored by the American Ecological Research Institute, Department of Biology, Cannon University, Friends of the Eastern Panther, Eastern Panther Research Network and the International Society of Cryptozoology. It will be open to those interested in the "history, mystery, current status and future of the eastern panther, the ghost cat of North America.

Discussions will cover recent research, developments and current needs, and make recommendations to streamline and unify future efforts relating to the cougar. Attendance will be limited to the first 300 registrants. For information, contact Jay Tischendorf, AERIE, P.O. Box 380, Ft. Collins, CO 80522 (303)224-5307.

## Californians Turn in Poachers

State wildlife officials in California have established a 24-hour toll-free hotline to report environmental crimes such as poaching and polluting. The line is operated by CalTIP (Californians Turn In Poachers), a privately funded program that provides rewards of up to \$1,000 for information on polluters and poachers. Tipsters can remain anonymous. The number is 800-952-5400.

## RODENTICIDES CAN KILL

*by Dr. Johnny D. Hoskins*

Chemical warfare against rodents is a common practice by many homeowners trying to rid their premises of mice, rats and other rodents. Although rodenticides (rodent poisons) are effective eliminators of pests, they can also be hazardous to cats.

Most rodenticides marketed today use anticoagulant (blood clotting inhibitor) chemicals, rather than the more hazardous compounds of strychnine or fluoroacetate. Rodenticides are formulated for use as toxic baits or tracking powders. When well designed, the baits are highly attractive to rodents with low potential for direct ingestion by cats. However, secondary poisoning can occur when a cat ingests a poisoned rodent. Fortunately, secondary poisoning is not as hazardous because the poison is at a reduced level. However, if the cat consumes several poisoned rodents within a short period of time, the potential for poisoning increases.

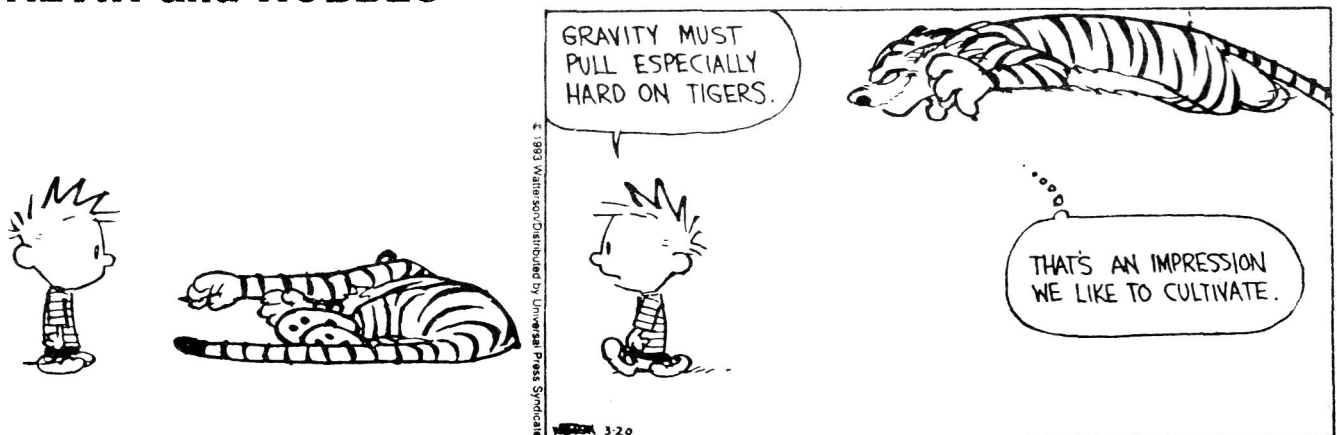
Tracing powders are more commonly used by professional exterminators. The tracking powders adhere to the feet and fur and are ingested when the animal grooms themselves.

Signs associated with anticoagulant poisoning include weakness, easy bruising of the skin, pale mucous membranes, difficulty breathing, nose bleeds and blood in the vomitus and stools. However it can take as long as five days before these signs are apparent. If you observe any of the aforementioned signs, schedule an appointment with your veterinarian may perform certain blood tests (i.e. prothrombin time, clotting time, packed cell volume) to determine the extent of the anticoagulant poisoning.

Treatment of anticoagulant poisoning consists of vitamin K therapy, and in severe cases a whole blood transfusion. Obviously, prompt treatment will reduce the chances related to internal hemorrhaging from excessive amounts of anticoagulants within the bloodstream.

ED NOTE: Rodenticides, though sometimes necessary, should always be kept well away from outdoor runs. Most healthy rodents will not enter a cat's pen so any found within your runs should be viewed suspiciously. Although you might not have used poisons, a neighbor might have.

### CALVIN and HOBBS



# Relevance of Big Cat Numbers to their Conservation

*By K. Ullas Karanth*

*Centre for Wildlife Studies, 499 Chitrabhanu Road  
Kuvempu Nagar, Mysore 570 023 India*

I believe that the leopard and tiger population estimates provided periodically by the Indian authorities are without any scientific basis. I have demonstrated this for tiger estimates in a couple of papers (Karanth 1987 and 1988), and the substance of my criticism is now being gradually accepted.

While acknowledging the excellent job done by Indian officials in protecting tigers and their habitats, I criticized their census technique for its assumption that the pugmark of each individual tiger can be distinguished with certainty in the field. I pointed out that this pugmark-based technique was flawed seriously because of similarity of tracks among equivalent sized animals, differences in track shape arising from soil conditions, speed and gait of the animal, skill of the tracker and other uncontrolled (and uncontrollable) variables. To "correct" the earlier estimates of tiger numbers, Indian authorities are now reportedly attempting to use computer identification of pugmarks instead of human classifiers. However, this remedy of using discriminant function analyses rather than the subjective opinion of individuals, still does not address the basic problems, due to which tracks in the field cannot be distinguished with certainty for a substantial segment of the tiger population. Further, this method has not been rigorously validated on known individual tigers. I am afraid that its use without such validation can only lead to "garbage-in garbage-out" results from the proposed computer analyses.

Based on the preliminary results of our research on tigers in Nagarhole National Park, we have found that photos from automatic camera traps provide reliable and rigorous identification of individual tigers, using stripe patterns. I would also strongly urge the authorities to give more attention to estimating the abundance of tigers' prey by using line transects and other valid methods, since prey base is the most important determinant of tiger population size in an area. If tiger conservation is to make headway on a scientific basis in India, the policies and management practices must receive input from qualified, competent carnivore biologists in the country. While advice from well-meaning conservationists, foresters, photographers and amateur naturalists is useful, it cannot be a substitute for hard scientific data.

The scenario for leopard estimates in India is even worse. Just to cite one example: after observing leopards for more than five years using radio telemetry, camera-trap and prey density information, I estimate that the Nagarhole Park in India holds about 100 leopards. My observation is that in most parts of south India dispersing leopard are turning up in areas from which they were eliminated over 30 years ago and leopard depredation seems to be dramatically increasing. Since the habitat availability has not changed so drastically, leopard numbers are probably increasing. Yet the official estimates for the whole state of Karnataka, having over 30,000 km of forests, is just 283 leopards. Of what use are such estimates for conservation planning?

Despite some shortcomings, the population estimates for Nepal's tigers produced by Smith et al. (1987) and for sub-Saharan leopards by Martin and de Meulenaer (1990) at least present a logical approach to the problem of estimating big cat populations over large regions, using data from site specific intensive studies.

In view of the above facts, I have been repeatedly and fruitlessly urging the Cat Group and others in the west not to legitimize the current big cat population estimates provided by local authorities by repeating them in IUCN publications, reports and action plans. Unfortunately, both IUCN and western zoo biologists seem to have the same compulsive urge to have some numbers, however unreliable they are. Consequently, baseless population estimates and other demographic "data" are being used to churn out most far-fetched population-habitat viability analyses (PVHA). I fail to see how this aggressive "let us save the tiger here and now on a lap-top computer" approach can help in the conservation of tigers or any other big cat species.

I believe that, at this point in time, we do not have enough information for estimating tiger and leopard populations. But I also feel with some effort we can come up with the information to generate reasonable useful estimates. The priority should be to do a few good field studies of densities and dynamics and prey base, and to estimate the extent and quality of habitat available through field surveys. Regrettably, these tasks seem to be the lowest priority items on the big cat conservation agenda of IUCN as well as of zoo biologists and field managers.

## USDA Reports Increase in Animal Welfare Inspections

The U.S. Department of Agriculture's animal welfare compliance inspections increased by 27 percent during the last fiscal year, according to the agency's "1992 Animal Welfare Enforcement Report." The USDA's Animal and Plant Health Inspection Service (APHIS) inspectors conducted 17,764 inspections at regulated facilities, including those operated by animal dealers, exhibitors, carriers and research facilities. This total represented an increase of 2,616 from 1991.

The greatest increase in compliance inspections, APHIS reported, affected dealers and breeders supplying the commercial pet trade. These inspections increased 36 percent. APHIS inspectors verified compliance at these facilities more than twice a year on the average. Facilities with noted problems were inspected more often.

In 1992, APHIS imposed civil penalties of nearly \$286,000. APHIS administers the Animal Welfare Act by enforcing standards for the care and treatment of animals sold into the pet trade, transported commercially, exhibited to the public or used in research.

Copies of the USDA's "1992 Animal Welfare Enforcement Report" are available by writing to USDA, APHIS, REAC-Animal Care, Room 565, Federal Bldg. 6505 Belcrest Rd., Hyattsville, MD 20782

## Leopards Keep Their Spots But Many Get New Names

Once there were 27 races of the leopard listed, ranging from southern Africa to the Sea of Japan. Now there may be only eight (8) as a result of DNA studies by Sri Lankan scientist, Dr. Sriyanie Miththapala, in collaboration with Dr. John Seidensticker, Curator of Mammals at the U.S. National Zoo, and Dr. Stephen O'Brien of the U.S. Cancer Institute, who is a leading specialist on cat genetics.

The authors propose that all eleven (11) subspecies of the leopard in sub-Saharan Africa be subsumed under *P.p. pardus*, the triomial for the North African leopard, which is on the verge of extinction. The Zanzibar leopard, *P.p. adersi*, is considered already extinct.

Seven (7) subspecies of west Asian leopards have been classed as *P.p. saxicolor*, the name of the North Persian leopard. The Sinai leopard, *P.p. jarvisi* is assumed to be extinct. Three subspecies in the Indian subcontinent have been grouped together as *P.p. fusca*, the Indian leopard. Sri Lankan, South and North Chinese, Javan and Amur leopards have retained their subspecific identities.

In a note, the three scientists point out that 27 subspecies were based largely on morphological and geographic descriptions of type specimens collected in the 19th century. They explain: "In an attempt to re-

examine the validity of subspecies partitions to reflect significant genetic differentiation, we have undertaken a molecular genetic analysis of protein and DNA variation in combination with a multivariable analysis of metric cranial measurements of specimens collected throughout the species range from zoos, wildlife preserves and museums.

"The molecular methods include allozyme variation at 49 loci, mitochondrial DNA restriction fragment length polymorphism, and feline specific minisatellite on DNA fingerprint variation. The cumulative results, which are summarized in Dr. Miththapala's Ph.D. dissertation (University of Gainesville, FL. 1992) and will be formalized and submitted for publication this year, converge on the following conclusions: "Based on the recognition of significant genetic and morphological differentiation, leopards assort into eight (8) distinctive subspecies groups. The recognized subspecies groups, which we now recommend be considered formal subspecies are:

1. *P. pardus pardus* - Africa
2. *P. pardus saxicolor* - West Asia
3. *P. pardus fusca* - India
4. *P. pardus kotiya* - Sri Lanka
5. *P. pardus delacouri* - South China
6. *P. pardus melas* - Java
7. *P. pardus japonensis* - North China
8. *P. pardus orientalis* - Amur"

Reprinted from Cat News

# Fears for the Wildcat in Israel

By H. Mendelssohn

Dept. of Zoology, Tel Aviv University

The wildcat (*Felis lybica tristrami*) was formerly widespread in Palestine (now Israel and occupied territories). It lived in various habitats, except for sand dunes. The preferred habitat was Mediterranean scrub forest on rocky slopes, but it occurred also in open habitats in which it used deserted dens of other mammals (foxes, porcupines, etc.). It also occurred in manmade habitats such as citrus groves, etc. and also in desert habitats.

At that time (in the 30s), the human populations were low, about 1,500,000 (now about 7,500,000) and only in a few areas were there dense human settlements, mainly in the coastal plain and in the hills between Nablus and Hebron. Even there, wild cats were quite common. With an increasing human population, more and more settlements were founded and in all of them domestic cats were, and are, kept.

Domestic cats breed twice a year and rear on average, four kittens in each litter. Because of the favorable climate and an ample food supply from garbage, the survival of young domestic cats (even if not fed by humans), is very good. Large populations developed and many became feral, penetrating into outdoor and natural habitats, occupied so far by wildcats. In competition with the wildcat, feral cats are superior. They are bigger and therefore, more successful in competition for living space. Wildcats are territorial and live at densities of about one specimen per km. They breed once a year and rear, on the average, three kittens, and so they are easily overpowered by the more fertile feral cats that are more social and live at much higher densities. Domestic feral cats seem to be closer to *Felis lybica*, from

which they have evolved, rather than to the European *Felis silvestris*. Therefore, the hybridization is widespread and pure *Felis lybica tristrami* have not been found for several years.

An additional factor has added to the extermination of *Felis lybica*. This species has no resistance at all against feline distemper (Panleucopenia); captive-born kittens die within their first year if not vaccinated. Feral cats seem to acquire resistance early in life and can infect pure wildcats.

If pure *Felis lybica tristrami* do survive anywhere in Israel, it can only be in as yet sparsely settled areas, as in some parts of the desert, the Jordan Valley or the Golan Heights. With increasing human and feral cat populations, they will also disappear from these areas - a lost conservation cause.

Because feral cats are able to live at high densities, and because, contrary to wildcats, they hunt also during the day, they exert a much higher hunting pressure than wildcats and have a disastrous influence, not yet fully appreciated, on some forms of wildlife, mainly reptile, ground and low-nesting birds and small mammals. One case concerns the local green lizard *Lacerta trilineata israelica*, a quite big, somewhat sluggish lizard, that has lived until now in the preferred habitat of the wildcat. Because of the low density at which wildcats live and because they hunt at night, both species have been able to coexist in the same habitat. The day-active feral cats that live at high densities have exterminated this lizard in many areas.

Reprinted from ICUN Cat News

## Readers Write



### WARNING

Dear Shirley,

I'd like to say a few words about the Pacific NorthWest report and the subject of fleas. PLEASE DO NOT WASH YOUR CAT OR ANY ANIMAL WITH DISH SOAP - ESPECIALLY DAWN.

I had a dog with bad skin problems. We tried everything, shots, pills, and even different vets. Finally, one vet recommended Dawn dish soap. Often. Well to make a long story short, the dog died. A post mortem showed kidney failure. The post was performed by Texas A & M Veterinary School. The cause - Dawn. The reason is that Dawn contains ethyl alcohol. The residue left on the animal can be licked off.

Shortly after this I ran across an article from the U.S. Poison Control Center that stated precisely this: Do not wash an animal in dish soap - it will cause kidney failure.

When I showed it to the vet he called the Poison Control Center and they verified the information. The article is still posted on his bulletin 10 years later.

A good solution to fleas is a flea comb. Start when the cat is a kitten and it will enjoy being combed. Vacuuming frequently also helps.

If you have fleas a supplement which includes iron may help. I use Hi-Vite vitamin drops.

Also, just using water when bathing will kill a large percentage of any flea population on your cat. Or a very mild pet or baby shampoo but make sure you rinse the cat THOROUGHLY.

Sincerely,  
Jean Hamil

## Obituary

We sadly report the death of long-time New York member Ralph Ferrer in mid-March, due to an ongoing illness. Ralph's bobcat, Daisy went to live with friends in Texas at the onset of his illness. Ralph joined LIOC with his ocelot, Delilah, in 1964, and was a supporting member for the next 30 years. LIOC and cats everywhere have lost a friend.

## THIS IS SPORT?

In Oregon a trophy hunter releases a pack of hounds whose collars are fitted with transmitters to pursue a bear or cougar. Eventually, after relentless pursuit, the exhausted prey climbs a tree to escape the baying dogs. When the dogs look up at the treed animal, their radio transmitters emit a signal. The hunter follows the signal to its source, then shoots the trapped animal at point blank range.

An effort to ban this type of hunting is underway. The measure will also ban bear baiting.

To place this measure on the November, 1994 ballot, activists must gather the signatures of at least 67,000 registered voters in Oregon by July 1st. If you can help, please contact the Oregon Bear and Cougar Coalition, Hawthorne Center, 4511 S.E. Hawthorne, Suite 204, Portland, OR 97125

## 10 AMAZING ANIMAL EXHIBITS

### **Best Swamp Stomp.**

Audubon Park and Zoological Garden, New Orleans, LA. The Louisiana Swamp exhibit puts animals, plants and educational displays in a natural swamp area.

### **Best Cheetah Speedway.**

National Zoological Park, Washington, D.C. Watch the world's fastest animals chase a lure along a circular track reaching speeds as high as 40 mph.

### **Best "Hippoquarium."**

Toledo Zoological Gardens, Toledo, OH. Make that the world's only hippoquarium—underwater windows give a nose-to-nose view of Mom, Pop and Baby Pumpkin.

### **Best Bugs.**

Cincinnati Zoo and Botanical Garden. Buzz on over to see more than 1 million bugs at Insect World.

### **Best Elephant Encounter.**

Woodland Park Zoological Garden, Seattle, WA. Pack your trunk and visit the Asian Elephant Forest!

### **Best Arctic Experience.**

Lincoln Park Zoo, Chicago, IL. Chill out with polar bears, Thor and Chuck Chi!

### **Best Ape Environment.**

Busch Gardens/The Dark Continent, Tampa, FL. Monkey around at the theme park's "Myombe Reserve—The Great Ape Domain."

### **Best Cuddly Koalas.**

San Diego Zoo, CA. The fuzzy marsupials are this famous zoo's

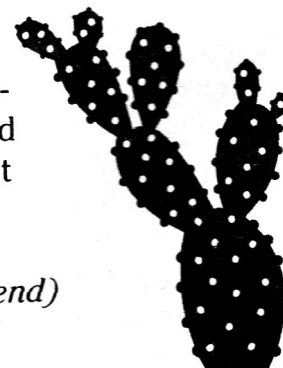
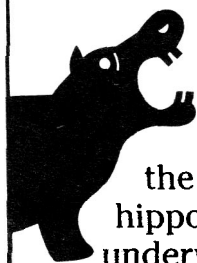
most popular exhibit.

### **Best Habitat Compare- and- Contrast.**

Omaha's Henry Doorly Zoo, Omaha, Neb. More than 600 animals and 2,000 plants from the rain forests of Asia, Africa and South America thrive under 80-foot-high ceilings.

### **Best Spot For Night Life.**

Arizona-Sonora Desert Museum, Tucson. Follow nocturnal foxes, snakes, lizards and others underground during the heat of day at the Life Underground exhibit here. (USA Weekend)



## Hyrax Favored Leopard Prey, Not Baboons

Analysis of 63 leopard scats collected in the western Soutpansberg area of South Africa showed 43% contained remains of rock hyrax (*Procavia capensis* or *Heterohyrax brucei*) with various antelopes second in frequency at 30%.

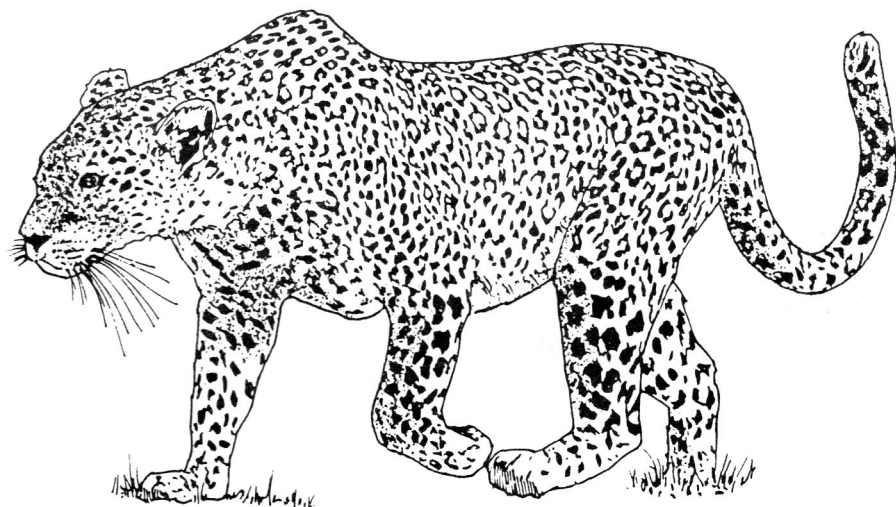
In a paper in the *Journal of African Zoology*, Chris and Tilde Stuart (1993), said primates were represented by two savanna baboons (*Papio ursinus*) and a single vervet monkey (*Cercopithecus aethiops*).

"The low frequency of baboon remains in the scats suggests that baboons are able to avoid predation by leopards, possibly due to their cooperative mobbing behavior. The study clearly refutes a popular belief that baboons are a major prey of leopards...nevertheless, it is likely that leopards may have an important effect on the selection of resting places and, therefore, movements, of baboon troops.

Other species found in the scats were porcupine (*Hystrix africae-australis*), aardwolf (*Proteles cristatus*) and scrub hare (*Lepus saxatilis*).

The Stuarts said the pattern of feeding of leopards in the Soutpansberg confirmed that they were opportunistic and would take virtually any consumable animal encountered, while showing preference for small to medium-sized animals. They also said that the fact that hyrax were almost entirely diurnal and spent the night in inaccessible holes meant that much leopard hunting in the Soutpansberg took place during daylight hours.

reprinted from Cat News



## 1994 Ralston Purina Big Cat Survival Fund Grants Awarded

A total of 14 complete applications (totaling \$367,431 in requests) were received for review by the AAZPA Scientific Advisory Committee (SAC). Upon recommendation of the SAC, the AAZPA Board of Directors has awarded the following grants totaling \$267,236.

*Continuing Safety Assessments of Contraceptives in Nondomestic Felids* (L.Munsen, et al., University of Tennessee) \$38,087.

*Reproductive Strategies for Understanding, Managing and Conserving Wild Felids* (D.Wildt, et al., National Zoological Park) \$8,000.

*Correlates of Reproductive Success and Management Styles in Captive Cheetahs* (S.Millard, et al., Zoological Society of San Diego) \$2,525

*Sao Paulo International Felid Breeding and Conservation Center* (P.Quillen, S.O.S.Care and J. Mellen, Metro Washington Park Zoo) \$7,500

*In Situ Development of the Indonesian Regional Sumatran Tiger Master Plan* (R.L.Tilson, et al., Minnesota Zoological Gardens) \$19,133

*Molecular Genetic Approach to Taxonomic and Phylogenic Relationships in South American Felids and Asian Small Cats* (S.O'Brien et al., National Cancer Institute) \$80,000 (C.Asa, St.Louis Zoological Park and P.Fail, Research Triangle Institute) \$30,000

*Preparation, Distribution and Efficacy of Hormone Containing Silicone Rods for*

*Contraception of Felids in Zoos and Wildlife Parks* (E.Plotka, Marshfield Medical Research Foundation) \$9,988.



## Herbal Pet Remedies

Herbs can be used for treating minor problems and as an alternative to smelly, dangerous and expensive flea control chemicals. While herbal aides can't be expected to destroy existing flea infestations, they will prevent infestations without the use of strong chemicals.

Pennyroyal or peppermint will keep pets fragrant and flea free. If you don't have access to fresh herbs, the oils of pennyroyal, peppermint, or cedar will work as well. If you suspect the critters are already occupying your carpet, dried, ground up herbs like tansy, pennyroyal, rue, southernwood, wormwood, marigold flowers or peppermint (or combinations thereof) can be sprinkled on and left for several minutes before vacuuming.

As a less direct approach to flea control, grow pennyroyal, mint, tansy and marigolds near kennel runs or in your pets favorite part of the yard to help ward off flea invasions. Chopped dandelion leaves added to your pet's food can combat hair loss. Other skin problems can be treated with a brew of blackberry leaves and clover flowers.

*Herb Quarterly.*

## Cougar Tracks Confirmed in New Brunswick

The New Brunswick Department of Natural Resources and Energy (DNRE), cooperating with the Canadian Museum of Nature in Ottawa, has confirmed the tracks, scat and hair found on 18 November 1992, were of cougar (*Puma concolor*).

Commenting on the finding in the Spring of 1993 edition of *Eastern Panther Update*, of which he is editor, Jay W. Tischendorf said he felt the animal was an adult, either an old female or a male between three and five years old. He stated that the finding proved the fact of the existence of the eastern panther *Puma concolor* cougar, which has been held to be extinct and called for positive, open, international discussion and active protection."

Tischendorf challenged the DNRE's statement that the signs were the first indisputable physical proof of cougars in New Brunswick. He cited a published 1932 photograph showing a man holding the skin of a cougar and the rifle with which he shot it in Kent County, New Brunswick, Canada. In addition, books by Bruce Wright had shown photographs of cougar sign in New Brunswick. Tischendorf reported information about a cougar killed by a car in Vermont in September, 1992. A second cat was said to have crossed

the road safely. He criticizes the Vermont wildlife authorities for dismissing the report, declaring that such animals did not exist in the state. If the animals were indeed cougars, "it would be highly suggestive of at least a small breeding population in the region", Tischendorf added.

He went on to list "documented cougar reports within the last 25 years in New Brunswick, Quebec, Ontario, Maine, Massachusetts, Pennsylvania, Manitoba, Michigan, Minnesota, Missouri, South Carolina, Tennessee, Oklahoma, Kansas and Nebraska.

"I believe we're dealing with a 1-4 low density, highly mobile widely wandering and widespread population of cats that for the most part descend from original stock. Breeding is sporadic, but enough, coupled with the occasional recruitment of escaped or released captives and rare western immigrants, to propagate the species. Numbers are increasing in response to habitat stabilization and growing numbers of deer and other prey."

Queried on whether the New Brunswick cougar might be an escape, Tischendorf, a fervent proponent of the eastern panther, agreed that it was a possibility, but thought it doubtful, given the remote and unsettled locale. But he said that pets did escape and some survived.

### NOMINATIONS NEEDED FOR ENGLER-DOUGLAS AWARD

At Convention a cash award is presented to the person who has done the most to further captive breeding efforts. This is done in memory of Bill Engler and Charles Douglas, two LIOC pioneers.

Please send your nominations for this year's award to:

Danny Treanor  
1898 Twin Lake Dr.  
Gotha, FL 34734

### AGENDA ITEMS SOUGHT

If you have any items you wish the Board to address, or you wish discussed at this year's convention please send them to:

Katie Knight Monteiro  
412 Matts Lane, Rt 3  
Alvin, Tx 77511

Agenda items must be received no later than July 1st, 1994.



## The Classifieds

All ads in this publication are void where prohibited by law. All transactions are between buyer and seller. All buyers and sellers must have proper licenses and permits for all animals offered for sale or sold. LIOC ESCF Inc. does not necessarily endorse or guarantee the honesty of any advertiser. LIOC ESCF Inc. reserves the right to edit or reject any subscription or ad. No blind animal ads will be accepted: all ads must a) contain name of business or individual, b) state whether the individual is owner or broker, c) show state and phone number or full address. For further information regarding advertising with LIOC ESCF Inc. contact the Term Director for Advertising & Publicity as listed inside the front cover of this Newsletter.

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