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November/December 2003



**Feline Conservation Federation**





## Feline Conservation Federation

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

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**To sign up, contact Leann  
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**The newly updated  
FCF web site  
is available at  
[www.felineconservation.org](http://www.felineconservation.org)**

**Cover: Little Chief Ocelot waves  
to you from the Playa do Oro  
Reserve in Ecuador, where he has  
found the living to be easy. Go  
visit him in January on the next  
eco-tour, led by guide and FCF  
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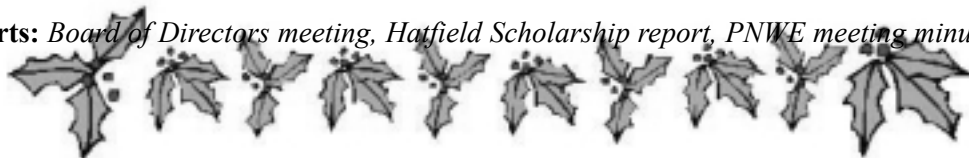
**Sambuca Serval gets ready for holiday parties by  
checking out the serving bowls. Photo by Nancy Barter**





## In this issue...

|                                                                                                                                    |    |
|------------------------------------------------------------------------------------------------------------------------------------|----|
| <b>A Focus on Jaguarundi:</b> <i>Information and a first-hand account of their care</i> .....                                      | 4  |
| <b>A Letter from the President</b> .....                                                                                           | 5  |
| <b>More Blasts from the Past:</b> <i>An article from a past newsletter and a shared personal letter from Catherine Cisin</i> ..... | 6  |
| <b>Ecology and Conservation:</b> <i>Four Wild Cats of Thailand</i> .....                                                           | 7  |
| <b>Cloned Carnivores:</b> <i>The First Cloned Wild Cat</i> .....                                                                   | 11 |
| <b>Legal Update:</b> <i>The Captive Animal Safety Act</i> .....                                                                    | 12 |
| <b>Conservation in Practice:</b> <i>Back in the Field With Tim Mallow's Bobcats</i> .....                                          | 14 |
| <b>A Pirate's Life:</b> <i>One Cat's Haven</i> .....                                                                               | 19 |
| <b>Wild Felid Training Series:</b> <i>Crate Expectations</i> .....                                                                 | 21 |
| <b>Dealing With Death and Dying:</b> <i>Managing the Loss</i> .....                                                                | 23 |
| <b>Playa de Oro:</b> <i>A New Resident and More Adventures Planned</i> .....                                                       | 26 |
| <b>Minutes and Reports:</b> <i>Board of Directors meeting, Hatfield Scholarship report, PNWE meeting minutes</i> .....             | 30 |

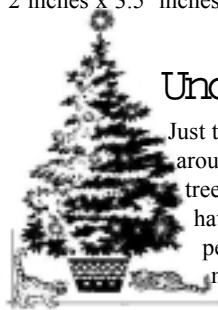


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## Undecorating Idea

Just thought I would pass along a little idea that I try to do every year. Go around to your area's Christmas tree lots, and ask them if they have any trees left over after Christmas if you can have them for your animals. I have done that, and sometimes in cities they have a designated place for people to dump their trees after Christmas, and I just go pick up as many as I like.

Prop them around in your cats cages, they love them. Mine will just go to town shredding them up and pulling all the needles out, batting the limbs around like toys, they have so much fun. In the cold they will last for a couple more weeks, if the trees survive your cats that long. Just be sure to get ones that don't have tinsel or anything left in them. The leftover ones from lots that were not used are the best, because you know they don't have any left over decorations on them.

I've used pines and various kinds of firs in the past with no problems. Some of my cats will pull all the needles out, and make a big pile with them, and then roll over in the pile of needles. I have heard that pine is a natural bug repellent, so maybe this is why they roll in it. Don't know if that is true or not, though. My bobcats and lynx tend to like the trees the most and actively destroy the trees.

I have not seen them actually eat any of them. It's great enrichment for them. And if your cat is real lucky, sometimes dumb little birdies try to fly into the trees too, much to the cats' delight. Have fun!-- Tracy Wilson





# JAGUARUNDI

By Laura Carpenter

The jaguarundi *Herpailurus yaguarondi* is generally found in lowland areas, ranging from south Texas to Argentina. It lives along the coast of Mexico, all of Central America, northwest Argentina, Peru and Paraguay. They live in a variety of habitats, from dry scrub, swamp and savannah to moist tropical forest and rainforests. Although they are more rare in moist forest types. They are most frequently associated with riparian and old-field habitats. They prefer dense ground vegetation. They avoid open countryside.

This sleek and slender cat appears to be relatively common over much of its range. However, it is very rare in the southwest United States and is thought to be extinct in Uruguay. It is listed as CITES Appendix II, except for the central and North American populations, which are, listed as Appendix I.

The jaguarundi has a very distinct weasel-like appearance, their name means “weasel-cat” in German. They look somewhat like otters, with an elongated head and body and short legs. They weigh between 6 and 13 lbs. Their fur is unpatterned and they occur in three different color forms; black, brownish gray and red, which may appear in the same area or even the same litter. The darker colors are, generally, most commonly associated with inhabitants of rainforests and the lighter colored individuals are found more frequently in dryer environments. The red form was once considered a separate species. They are not closely related to other South American small cats, but are believed to share an ancestry with the cougar *Puma concolor*. It has been suggested that the solid coat of the jaguarundi is because these cats are diurnal hunters and terrestrial. Nocturnal activity is occasionally observed, but the peak period of activity has been found to be 0400-1100hrs. Jaguarundis have been frequently observed traveling in pairs. They prefer to hunt ground-dwelling birds rather than mammals. Nevertheless, they occasionally hunt rodents, rabbits, and reptiles. It has been found that in Belize, arthropods are frequently eaten and they have been observed to prey upon characid fish stranded in a puddle.

The breeding season is year round in the tropics, with two peak periods in Mexico, in September and November and a late autumn period in the northern part of their range. Gestation period is 70 –75 days, with a litter size ranging from 1-4 kittens. Fallen logs, hollow trees and dense thickets are often used as denning sites. They can live 15 years or more in captivity.

The principle threats to the jaguarundi include some hunting due to predation on domestic poultry, being caught in traps meant for other species, and habitat loss and fragmentation and human encroachment. Their home ranges are very large. Making them very vulnerable to habitat loss.

I had the pleasure of taking care of two jaguarundis at the Cincinnati Zoo. Rojo and Houston have passed on, but I still have fond memories of them. They were both very good cats. We could go in with either one, or both. Rojo was red and Houston was brownish gray. Houston had her favorite tree that she would sit in and Rojo would either follow me around or lay back and watch, me, making the distinctive chatter that jaguarundis make. They loved to be together. They would spend most of their day curled up together in front of the window of their exhibit, either sleeping or grooming each other. They loved it when I would throw papayas into their water. Rojo, especially, loved to fish them out and carry them around. The next day I would find seeds and papaya strewn throughout the exhibit. They also liked to get treats out of papier-mâché balls and they liked blood and fish cubes. Houston developed a habit of overgrooming her side and I spent a long time trying figure out ways to make her stop. Finally, I found that if I painted bitter apple on her side she would leave it alone. I taught her to lie on her shelf and let me use a paintbrush to apply it to her and when I was finished, I would give her a chick as her reward (those were her favorite). This became our daily routine and eventually her fur came back. After Houston got sick and died, Rojo started to go down hill and this summer, we lost him as well. I will miss taking care of jaguarundis because our zoo will not exhibit them anymore.

It is becoming increasingly rare to see jaguarundis in zoos, due to the fact that they do not have an SSP and are not part of the AZA's regional collection plan.

## References

- Nowell, K. and Jackson, P. 1996. *Wild Cats*. IUCN, Gland, Switzerland.  
Reed-Smith, J. 2003. *Biological Information on Selected Mammal Species*. American Association of Zoo Keepers, Inc.  
Lion Crusher <http://www.lioncrusher.com>

Laura Carpenter is a keeper at the Cincinnati Zoo. Among her charges are most of the cat collection on site.



## A Note From Your President

To the Feline Conservation Federation Membership:

As you may be aware, your Board of Directors has been working on a major revision to the FCF by-laws for about two years now. The original intent was to clean up a significant number internal conflicts and overlap between individual sections that had crept into the by-laws over the years and make all language gender neutral. The board also took this opportunity to revised sections of the by-laws which experience had shown were not conducive to the needs and best interest of the membership, or the smooth operation of the corporation. The new by-laws will be posted a page or two at a time in the newsletter as space permits. I urge you all to review these and provide whatever feedback you feel is appropriate to the board.

Three areas of change that may be of special interest to the membership involve the structure of the FCF Board of Directors, the plurality needed to change the by-laws, and the definition of our fiscal year.

The term of office for the entire FCF BOD, including Life Directors, is now a 2-year term. This change was possible because the term of Life Directors is only defined in our by-laws and not in the constitution. This action was taken in response to recent experience which lead the board, and many individual members, to recognize that having board members who are not accountable to the membership during elections can be detrimental to the organization. I expect that consideration of removal of the existing references to the position of "Life Director" in our Constitution will be the subject of future proposed amendments to our constitution.

The plurality required to change our by-laws was changed from a simple majority vote to a 2/3 majority vote of the BOD to approve new by-laws or changes to existing by-laws. This will provide additional stability in the content of our by-laws in the future.

FCF fiscal year has been changed to Jan 1 to Dec 31, which will give much more accurate financial picture of the corporation as it now encompasses an entire cycle of FCF events in the same year, instead of splitting the income and expenses of Convention into two fiscal years as has been customary in the past.

On another subject:

Call for Nominations: Nomination period is defined by our Constitution as Jan 1 to March 31. The correct procedure for nomination outlined in our Constitution which may be found in your Membership Handbook included with the December issue of the FCF newsletter.

Constitutional Amendment period - Jan 1 to March 31 is also the period of time when members may make motions to amend the

Constitution. The correct procedure for members to propose Constitutional amendments is outlined in our Constitution which may be found in your Membership Handbook included with the December issue of the FCF newsletter.

I urge all members to reflect on your degree of satisfaction with your organization and its leadership and take full advantage of the nomination and amendment processes to address any concerns you may have.

Last but not least, it is with great regret that I wish to inform the membership I will not be seeking re-election as President of the FCF in 2004. My two terms as President has been a wonderful experience for me. It has been a time of considerable change and many challenges for the FCF and it has been a privilege to serve the membership during this time. Looking back I am pleased at the number of accomplishments that we have made as an organization while I have been in office. Of these none pleases me more than the success of the Husbandry Course. Having been recognized with this year's Lotty award makes my decision not to run for re-election even harder for me. But I have come to realize the duties and responsibilities of the President demand more time and energy than I have available at this point in my life. So the time has come for me step aside and made room for someone else. I plan to stay actively involved in the FCF and look forward to seeing you all at next year's convention.

Respectfully,

George N. Stowers  
President, Feline Conservation Federation

Kevin  
Chambers'  
lions have  
once again  
produced a  
gorgeous  
white cub.



## Looking Back on our Past . . .

The 16-page LIOC newsletter contains news of the Big Cats, Little Cats TV production. Reported in **News from Around the Jungle**, all members are alerted to watch this NBC production scheduled to be aired May 11, 1968. Many LIOC members' cats will be shown in portions that were filmed at LIOC meetings in California. . . "Wolper hopes that this exposure on national television will help to dispel many of the myths and prejudices plaguing owners of exotic cats. Among other things, this show will carry the story of Bill Engler and of his cats being run out of town." There are six LIOC chapter reports this issue, and the California Valley Branch of LIOC meeting report shares the story of filming for this television special.

### Report of meeting

Sunday, January 14, 1968 at the home of John and Regina Breslin in Valinda, California

Wow! What a Production!!! To use TV vernacular. We have been given the word that Wolper Productions would be at our meeting to film our cats for their coming picture "BIG CATS - LITTLE CATS" - - and if you want to draw a big crowd, just say "movies". There was no way of taking an accurate count, but there were approximately 100 people and about 20 cats, not counting he Breslin's two ocelots.

We (the Crafts) arrived a little late and the cameras were already being set up as we entered the yard. What a yard to enter! Cats were staked out all around the fence and it was quite a picture. First three chaus cats, then a little margay, next a young ocelot teasing, but not able to reach, the young leopard, now 8 ½ months old - - then the kittens, ocelot and margay "Gin and Sling", very aloof in the corner; "Dino" my favorite cheetah; across the path, trying to look grown and dignified, the North American puma we have watched growing very big since last fall. He still acted like a kitten when he growled at Dino and

Dino growled back at the puma and owner, puma, chair and all went in the opposite direction.

Next, more little ones, little margay, Kitty who stayed in her little house behind which was a bush with a little jaguarondi hidden behind it, another little house with a leopard cat hiding in it, - - then two ocelots, two more margays and leopard cat Maby with her two babies. The male being temperamental, sat in Harriet's lap and tried to convince everyone he was the biggest cat there. What a growl for such a small one!

Then our star, Candy the puma, was more or less in the center of all this. Candy has been in movies before and the pet puma couldn't be better represented, She is a full-grown South American and lives with her owners in an apartment. She loves everyone and is perfectly behaved. If I understand correctly, Wolper Productions had filmed her at home that morning.

As Dick Laird called the meeting to order the cameras started to roll and amidst the fascination of seeing what the camera was getting, I don't even know what he said. I'm not sure he did either, though, so hope I'll be forgiven this time?

Then it was over and as quietly as they came, the cameras were gone. I remembered then to ask my son if they had filmed his ring tailed cat. He said, "No, they weren't sure it was a cat." I'm really not sure either even though it has to have both cat fever shots and rabies shots.

Respectfully submitted, Alyce Crafts Corresponding Secretary,  
Cal-Val Branch of LIOC

## Letter from Catherine Cisin, Founder of LIOC, that was read aloud at the N. CA Branch meeting in 1966

Loreon has asked me for "a few words" regarding the imminent possible name change of the Northern California Branch of LIOC. In the fewest possible words..."It is strictly up to you!"

The Long Island Ocelot Club has carried its now famous name for over ten years. Although it is mis-named in two respects...1. Long Island and 2. Ocelot, it survives and functions.

Membership began with three ocelots in a little town on Long Island, so what would have been a more logical name than "Long Island Ocelot Club?"

Through the years membership grew to International proportions. The current overall count of member families to date (July 27, 1966) is 648. The people in Half Moon Bay, El Paso, Miami, Boston, Paris and in hundreds of less familiar places have come to accept LIOC as they might accept any other combination of words which has achieved widespread recognition.

Loreon's breakdown of species within the Northern California Branch shows: 23 ocelots, 10 margays, 5 pumas, 1 tiger, 1 lion, 1 leopard, 2 jaguars, 2 leopard cats and one lone wolf. This distribution is very representative of the breakdown of species in LIOC's whole membership. Combining ocelots, margays/small leopard cats suggests the felidae on the one hand and the larger cats--the panthers--on the other. This grouping might indicate a narrower starting point for any name change in your specific group. The wolf will have to shift for himself. He'll make it!!!!

The value of LIOC, however mis-named it may be--is constantly proven to me by the deluges of mail from confused misinformed new owners--or from potential owners--of cats of many species. They seek advice, sympathy, information and assistance. If they live in isolated areas or in areas where there is no LIOC branch, we try to help them by mail. In areas where, as in Northern California, there is a branch of LIOC they are referred to local people for help.

In all instances, the value of the bi-monthly newsletter is evident. As editor, I try to keep it primarily informative and secondarily, entertaining. The Newsletter also serves to announce and to report sectional meetings where such service is indicated. The Newsletter is yours, each of you in Northern California, in the other sectional branches and in the areas where there are no branches.

My compensation for my effort in preparing the Newsletter for the printer and

for mailing it is not monetary. It is the personal reward I feel, having given something of myself to the felines we all have made so dependent upon us....

Well, I certainly am digressing! My present point is to impress upon you that the Newsletter is actually yours. Without you--your interest and your contributions, literary and photographic, it wouldn't exist. Please feel free to express yourselves on behalf of your felines whenever there is a story to tell, a point to make, whenever you have information to impart, and whenever you have a photographically good picture you'd like to share with the membership.

To get back to Loreon's request!

The name of your group as a Branch of LIOC is wholly your own decision. Only you are familiar with your internal involvements which may make a new designation desirable. Only you can make your decision. Other sectional groups within LIOC are using geographic designations as you have been doing for these many years.

The names by which we are known are far less important than the efforts we exert to benefit our cats. It is our existence which is vitally important if we are to continue to serve them.

Signed,  
Catherine Cisin

Submitted by Loreon  
Vigne

*Ultimately it is how we  
care for our cats and  
how we treat each other  
as human beings that is  
the important thing.*

**Sketch of Catherine  
Cisin with her ocelot**



## Ecology and conservation of four sympatric wild felids in north central Thailand

By Lon Grassman, Jr.

The conservation of rare wild felids dictates that we must first understand species natural history. Many of the world's endangered cats have never before been studied, and time is running out for conservationists to help these cats avoid extinction. Five years ago I began my research project on the ecology and conservation of endangered wild cats in Thailand, with the final objective of writing conservation plan for these species. After seeing a camera trap photo of a clouded leopard (*Neofelis nebulosa*), taken by the Royal Forest Department in Phu Khieo Wildlife Sanctuary (PKWS), I quickly choose this area as my study site in 1998. Four years and 28,000 trap-nights later, I am now writing up the results of my study on 4 clouded leopards, 2 Asiatic golden cats (*Catopuma temmincki*), 1 marbled cat (*Pardofelis marmorata*), and 26 leopard cats (*Prionailurus bengalensis*).

Nine wild cat species occur in Thailand. Of these, natural history research using radio telemetry existed only for the leopard cat, leopard and clouded leopard.

The other 6 species, tiger (*Panthera tigris*), golden cat, fishing cat (*Prionailurus viverrinus*), marbled cat, jungle cat (*Felis chaus*), and flat-headed cat (*Prionailurus planiceps*), prior this study, had not been studied in the wild. Clearly, there is a substantial deficiency in baseline ecological data for the felids of Thailand.

The objectives of this study were to gather information on cat movements as pertain to home range size and intraspecific overlap, activity, daily movements, and to determine prey selection. Radio-telemetry, camera trapping, and fecal analysis were the primary vehicles used to gather these data. Secondary objectives included the collection and analysis of chemical immobilization data and the identification of ectoparasites collected from the study animals. The analysis of this study will be available in several scientific publications over the next 6-12 months.



**A wild-caught clouded leopard being studied under sedation:  
A rare opportunity to document data that will help us  
understand their way of life and their needs.**

### STUDY SITE

Established in 1972, PKWS (lat. 16°5'-16°35' N, long. 101°20'-101°55' E) encompasses 1,560 km<sup>2</sup> of forests within the larger 4,550 km<sup>2</sup> Western Issan Forest Complex. It is the largest protected area within the northeastern region and 1 of only 3 protected areas in Thailand that did not contain a permanent human settlement.

PKWS is dominated by a mixed evergreen forested plateau at 800-1,100 m elevation. Topography consists primarily of forested hills rising into mountains westward. The habitat is composed of dry and hill evergreen (75%), mixed deciduous (13%), dry dipterocarp (4%), bamboo (4%), grassland (3%), and forest plantation (1%) species.

Vertebrate species presence lists indicates the occurrence of 413 birds, 109 mammals, 75 reptiles and 28 amphibians. The Order Carnivora is particularly diverse, numbering 30 species. Some of the larger mammals present in PKWS include: elephant (*Elephas maximus*), gaur (*Bos gaurus*), sambar (*Cervus unicolor*), muntjak (*Muntiacus muntjak*), tiger (*Panthera tigris*), and dhole (*Cuon alpinus*).

The study area was located in the north-central portion of the sanctuary. Encompassing approximately 200 km<sup>2</sup>, the area consisted of forested hills of 700-1,100 m elevation, 3 permanent reservoirs and a 2.0-km<sup>2</sup> grassland area. The main park road, Thung Kha Mang Headquarters smaller trails, the Phrom River, and several permanent streams also were included within the area.



## RESEARCH METHODS

Traps were set along the main road, trails, and riverbanks where carnivore sign occurred in the form of tracks, feces, or scrapes. Captured cats were anesthetized with an intramuscular injection of Zoletil (tiletamine hydrochloride) at 10 mg/kg, or Calypso (ketamine hydrochloride) and Rompun (xyzaline hydrochloride) at 25 mg/kg and 2 mg/kg respectively. Sedated animals were sexed, aged, measured, weighed, ectoparasites collected, genetic material collected (hair and blood), radio-collared, and photographed. Sub adults were fitted with additional space in the collar to allow for growth, but juveniles were not collared.

Adult animals were fitted with a 55 – 120 g, collar-mounted radio transmitter at 148-149 MHz (Advanced Telemetry Systems) to obtain information on movements and activity patterns. Each transmitter contained an activity switch activated by animal movements. An internal lithium battery provided a constant pulse signal for 8-16 months.

All tracking was done on the ground, with either a hand-held 3-element antenna, or a large, vehicle mounted null antenna. Hilltop stations were frequently used for establishing first bearings when a radio signal could not be received at lower elevations. A helicopter was used occasionally for determining the general location of difficult to locate animals, but not for triangulation. Signal range varied from 1-15 km depending upon the obstruction of the terrain such as dense forest and hills, and the elevation at which the signal was received.

Home range size was calculated using the total number of radio locations for each animal. Independence of locations was assumed by using only one location per 24-hour period. Location data was collected intermittently throughout this study. Animal locations were determined using the LOAS® (ESS Inc.) software program. Home ranges were analyzed using the 100% and 95% minimum convex polygon (MCP) method and the 95% fixed kernel (FK) method. These estimators were generated with the ARCVIEW® (ESRI Inc.) Geographic Information Systems (GIS) software program Animal Movement Extension.

To assess temporal activity patterns, activity levels for each radio collared study animal was recorded intermittently during 24-hour diels. In addition, activity data was gathered from direct observations, camera-trap results, and trap timers. I assumed that 15 minutes satisfied independence of observation for the duration between each activity reading, but activity data was also collected during telemetry triangulations (*ca* = 5 min/reading). Intra-specific activity comparisons were based upon sex, age, and climatic season.

Examination of diet was accomplished by the analysis of scats. Scats in the field were identified and matched to the species by the presence of tracks in conjunction with appropriate fecal diameters. Scats were collected along trails, roads, and occasionally from trapped carnivores. Scats were washed over 1 mm wire mesh with tap water, and hair, bone and other contents separated and dried. Hair samples were mounted on microscopic slides for examination of the cuticular and medullar characteristics to compare and match with known specimens in a reference collection. The number of each prey species found in a fecal sample was recorded based upon particular body parts or hairs consistent with that species, although this number represented a minimum estimate. Prey selectivity was compared to the wet and dry seasons and focused on frequency of occurrence.

## RESULTS



### CLOUDED LEOPARD

Between April 2000 and February 2003 two adult male and two adult female clouded leopards were captured, radio-collared and tracked for seven to seventeen months. Clouded leopard female CF1 was pregnant when captured and judged to be late term (> 2 mo.). All four animals exhibited complete dentition and were in excellent physical condition upon release after sedation and collaring.

A total of 330 radio locations were recorded for these four animals to calculate home range size (HRS). The



overall HRS (95% MCP) for male clouded leopards CM1 and CM2 were 45.1 km<sup>2</sup> ( $n = 62$ ) and 29.7 km<sup>2</sup> ( $n = 70$ ) respectively, while females CF1 and CF2 showed an overall size of 25.7 km<sup>2</sup> ( $n = 133$ ), and 22.9 km<sup>2</sup> ( $n = 70$ ). All home ranges encompassed small core areas (= 6.0 km<sup>2</sup>). There were marginal shifts in HRS during the wet and dry seasons with the largest sizes occurring during the wet season (increase = 24.3%). All of the clouded leopard home ranges overlapped, with the greatest range of overlap occurring between males and females (= 30.9 %). However, intrasexual male overlap also was considerable (31.4% and 47.5%). Clouded leopards traveled an average of 1,932 m per day, and were active 58% of the time.

All four clouded leopard home ranges encompassed three habitat types: closed forest (83.9% coverage), open forest/grassland (15.7% coverage), and abandoned orchard (0.4% coverage), in addition to major streams and the main road. All recorded locations of CM2 in open forest/grasslands were at night, presumably for hunting hog deer and muntjak, which were observed to bed-down *en masse* after sunset.

#### ASIATIC GOLDEN CAT

Between February 1999 and November 2000 one adult male and one adult female Asiatic golden cat were captured, radio-collared and tracked for twelve to sixteen months. The pelage of these two cats differed remarkably, demonstrating the polymorphism noted for this species. The female exhibited a high degree of melanism being very dark brown, while the male was light brown. The female was blinded in one eye from a previous trauma, but both cats appeared otherwise healthy.

A total of 154 radio locations were recorded for these two animals to calculate HRS. The overall HRS (95% MCP) of male GM1 and female GF1 were 47.7 km<sup>2</sup> ( $n = 85$ ), and 32.6 km<sup>2</sup> ( $n = 69$ ) respectively. Fifty three percent of male GM1's home range encompassed 77% of female GF1's range. There was a slight shift in HRS during the wet and dry season for GM1 with an increase of 16% during the wet season. Female GF1's HRS did not change appreciably between seasons. Golden cats traveled an average of 1,597 m per day, and were active 56% of the time.

Analysis of 21 scats and 2 observations indicated that clouded leopards and golden cats consumed a minimum of nine species. The diverse prey base consisted of terrestrial and arboreal mammals and was dominated by murids (39% frequency of occurrence). Small mammals (= 2.5 kg) constituted 78% frequency of occurrence.



#### MARBLED CAT

Between May 2001 and June 2001 one adult female marbled cat was captured, radio-collared and tracked for one month. This cat, trapped in a mixed hill evergreen/bamboo forest, appeared healthy but was underweight. Her nipples revealed no evidence of previous suckling.

A total of 23 radiolocations resulted in an overall HRS (95% MCP) of 5.3 km<sup>2</sup>. This cat expressed a mean one-day movement of 477.0 m. After capture this cat moved consistently westwards towards mountainous terrain until the radio signal could not be received. Subsequent helicopter radio tracking failed to locate this cat again.

The marbled cat was active 84

(46%) of 183 activity readings (2 observations, and 181 telemetry readings). Data were insufficient to chart diel patterns, but a general trend of increases in activity during nocturnal and crepuscular time periods was observed.

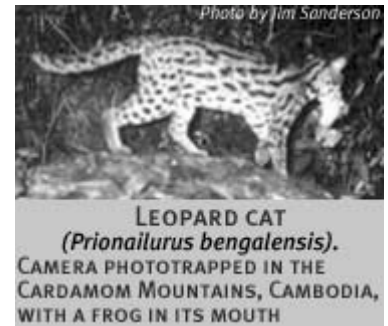
## LEOPARD CAT

Between June 1999 and February 2003 eighteen adult male and eight adult female leopard cats were captured, radio-collared and tracked for one to twenty months. A total of 1,739 radio locations were recorded for 23 animals to calculate HRS. The average overall HRS (95% MCP) for leopard cat males ( $n = 15$ ) was 11.9 km<sup>2</sup>, while female home ranges ( $n = 8$ ) averaged 13.2 km<sup>2</sup>. Male core areas (50% MCP) averaged 2.2 km<sup>2</sup>, while females ranged within an average core area of 1.8 km<sup>2</sup>. Male and female HRS and core areas were not significantly different. One female showed a shift in her initial home range of 7.9 km<sup>2</sup> ( $n = 14$ ) to a second home range of 8.5 km<sup>2</sup> ( $n = 57$ ). All other cats occupied single home ranges throughout the course of this study.

Seasonal HRS increases were observed during the wet and dry season for 18 of 23 leopard cats. Increases in HRS during the wet season averaged 63.7%, while wet season increases averaged 79.7%. These differences were not statistically significant ( $p > 0.5$ ).

Home range overlap utilizing the 95% MCP occurred between 136 leopard cat pairs. Male-male overlap averaged 41.3% of the paired home range area. Female-female overlap averaged 42.4%. Intersexual overlap averaged 43.4%. Radio collared leopard cats traveled an average of 1,299 m per day, and were active 52% of the time.

A total of 53 leopard cat feces revealed that leopard cats utilized at least 7 prey species. Murids, identified only to the generic level, dominated frequency of occurrence (85%). *Rattus* spp. was the most common prey item found in leopard cat diet (55%), followed by *Mus* spp. (30%). Other prey items included the Indochinese ground squirrel *Menetes berdmorei* (4%), lesser mouse deer *Tragulus javanicus* (4%), unidentified bird (4%), unidentified mammal (13%), and insects (21%).



## CONSERVATION

Since the 1960's forest cover in Thailand has decreased from 53% to 22%, with just 12% remaining in the northeast. Throughout northeast Thailand most forested land has been converted into agriculture. The Western Issan Forest Complex, Khao Yai National Park and Pang Sida National Park are the only large remaining forested blocks remaining in the region. These areas represent the last habitat for clouded leopard and other rare felids in the northeast. While a preservationist policy of non-use, rendering Phu Khieo inviolate to human activities would clearly benefit wildlife population, it does not represent a realistic, working management paradigm. Shutting villagers out of the forest for the reason of preserving a wild place simply for the intrinsic value, while philosophically agreeable to the Western mindset, will likely only provoke contempt among locals. Villagers must be taught and encouraged to use a sustainable-use ethic in certain rigidly controlled areas within the buffer zone for the long-term conservation of Phu Khieo. Only if this management is shown to be unsuccessful should a preservationist policy be considered.

This project yielded original natural history information on clouded leopard, marbled cat and Asiatic golden cat, and added to our knowledge of leopard cat ecology. To this end it was necessary to capture, radio collar and track these felids over a long period, and only after an exhaustive live trapping effort. A study of shorter duration with fewer resources would likely have failed to uncover the data gathered from this study. Future studies throughout the world may follow a similar position where felid densities are low (either naturally or artificially) and only a thorough and time-consuming effort will ultimately be successful. It is thus essential that to gain the knowledge conservationists need to conserve wild felids long-term, comprehensive studies must be encouraged and supported. Time is short for many wild cats and the time for action is now.

## THE FUTURE

Pursuant to funding, we anticipate a return to Thailand to complete the genetic analysis of our blood samples. These samples are crucial in helping to measure genetic diversity among wild Thai felids, and in measuring site fidelity and kinship among our study animals. Genetic material from wild cats in Southeast Asia is extremely rare, thus we are anxious to complete this analysis as soon as possible. We would greatly appreciate and welcome your support for the wild felid genetic study with contributions sent to Dr. Mike Tewes, Feline Research Program, Caesar Kleberg Wildlife Research Institute, MSC 218, Kingsville, 78363, TX. All donations are tax-deductible. Further inquiries may be directed to me at: [kslig01@tamuk.edu](mailto:kslig01@tamuk.edu).

# Copied Cat

The birth of his African wildcat father three years ago at the Audubon Center for Research of Endangered Species made worldwide news. And now Ditteaux, the world's first cloned wild carnivore, also born at the center, is making history in his own right.

The 2-month-old African wildcat is only the fourth endangered species ever to be cloned, a carbon copy of another Audubon first, Jazz, the test-tube African wildcat whose embryo was frozen, thawed, then implanted in a domestic cat. Cells grown from a dime-size piece of skin taken from Jazz's abdomen gave Ditteaux his start.

A domestic tabby served as the cloned cat's surrogate mother, marking another successful inter-species embryo transfer that scientists say is one of the many tools they are working to perfect to help save endangered species.

Scientists hailed Ditteaux and the impending birth of two other cloned African wildcats as the newest sign that cloning may be another weapon in the battle to save endangered species against extinction. It was a 2-year effort led by Betsy Dresser, the institute's senior vice president for research; senior scientist C. Earle Pope; and veterinarian Dr. Martha Gomez.

Gomez estimated that about 1,000 individual animals have been cloned. But the birth of Ditteaux marks only the fourth time scientists have successfully copied an endangered species and the first time they have cloned an endangered exotic cat.

"Betsy and her crew have actually cloned and gave birth to the first endangered wild carnivore," possibly helping one day to make "extinction extinct," Audubon Nature Institute President and CEO Ron Forman said.

"We're not trying to mass produce babies. What we're trying to do is bring new genetic material" into dwindling animal populations, Dresser said. "That's the beauty of cloning: so we can salvage lost genetics."

Cloning could be used to preserve the genetic diversity of wild and captive animals essential to a species' survival by producing healthy animals from animals that reproduce poorly in captivity, that are too old or too young to reproduce, or that are diseased, Dresser said. It also could be used to boost the population of some species in special cases.

As the technology improves, the success rate for cloned animals will improve, and techniques already are becoming less invasive to the animals, Dresser said.

One example of cloning's value is the rusty spotted cat, another species of wildcat, she said. The Audubon Zoo has the only one of its kind in the United States, and it has preserved cells from a female that died.

"They come from Sri Lanka, an area where we don't know what will happen there. All we do know is, with the potential power of the frozen zoo and technology, we hope we can save these species for the future," she said.

## Copy that

Ditteaux was not the center's only ground-breaking baby in recent weeks.

On Sept. 6, the world's first caracal was produced from an embryo that was frozen, then thawed. And on Oct. 1, the first serval ever produced by in vitro fertilization was born. The caracal also was produced by in vitro fertilization, as have other caracals before it at the Audubon center, and both embryos were transferred to mother cats of the same species.

Sunday October 12, 2003 by Sandra Barbier. Sandra Barbier can be reached at sbarbier@timespicayune.com or (504) 826-3784.

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Scientist Jim Sanderson has been working in the field on behalf of wild cat for many years. He is currently setting up camera traps in more than 50 countries in an effort to identify what areas of existing undisturbed land can be salvaged as national forests and protected habitats. Here he holds a collared jaguarundi being studied.

## **Captive Animal Safety Act will pass – what does it mean for FCF members and the cats?**

Lynn Culver, FCF Director of Legal Affairs

For cat people, September 11, 2003 marked the day HB1006, a bill that had been introduced back in February 27, 2003 by Representative Buck McKeon (CA) and seemingly going nowhere all year, was stirred into activity and place on the Union calendar. HB 1006 is the Captive Animal Safety Act, companion bill to the Senate Bill 269 of the same title, sponsored by Senator James Jeffords (VT).

This late in the season, it seemed unlikely for much to come out of this recent development with so many other pressing matters before Congress needing attention. But everything changed when big cats made headlines in October. First Las Vegas magician Roy Horn suffered injuries during his stage performance with Montacore, one of his tigers. Then following that national spotlight, came the discovery of a 5<sup>th</sup> floor New York apartment dweller that kept a caiman and an adult tiger with him. Finally, in an joint ASA/PETA funded publicity stunt gone wrong, a young lion cub purchased as part of a New York Enquirer expose' on how easy it is to buy baby big cats, and originally to be flown to Tippi Hedren's sanctuary Shambala, experienced a sudden change in plans when the reporter panicked after failing to master the art of bottle feeding the young lion and dumped it at the same Ohio sanctuary that accepted Ming, the NY apartment tiger. These three national events triggered new Congressional interest in the Captive Animal Safety Act and the Senate made the first strike. On October 23 an amended S269 was reported out of the Committee on Environment and Public Works and placed on the legislative calendar under general orders. Just one week later, late in the evening of October 31 the Senate passed 269 by unanimous consent. Hardly surprising, but certainly stunning the cat community.

Halloween night everyone asks the familiar question of "Trick or Treat?" However, to the exotic cat community, this was nobody's idea of a treat, and subsequent research uncovered it was clearly a trick. The question of how this happened was burned into everyone's mind. FCF member Sara Schimke was determined to find out what went on that day in Congress. Sara researched the Congressional record to learn that Senate Majority leader Bill Frist stated that it had already been announced the night before that no roll call votes would take place on Oct 31st. Senate Minority Whip Harry Reid suggested absence of quorum and Senator Carl Levin rescinded the order. Anything discussed at that time, if there were no objections by the leaders or anyone present, could be passed by unanimous consent without the minimum number of members present.

This lead to more questions, so Sara called the Secretary of the Senate's office to get some clarifications. She was told that "unanimous consent" when referring to a bill, means that it was "worked out or discussed off the floor and beforehand". Senator Mitch McConnell was the one to bring the Captive Wildlife Safety Act to the floor. He's not a co-sponsor, but the Senate Majority Whip. With both

Majority and Minority Leaders present, they had the ability to object for either party but didn't and so the S269 bill with amendments was read three times and passed by unanimous consent with no votes by the actual senators, or possibly no senators even present, we'll never know, since with the absence of quorum there was no official roll taken for the record for that day.

The responsibility for particular bills falls upon leaders called floor managers, generally the bill's prime sponsor or the chair of the committee responsible for it. The floor manager of the majority party tries to shepherd the bill through the Senate, and the minority floor manager tries to alter the measure or defeat it outright. Whips are assistants that help the majority and minority leaders to organize their members. The name for the position of Whip is derived from the term "whipper in", which is a British term for the person responsible for keeping the foxhounds from leaving the pack. The whips try to persuade members of their parties to support the party on Senate votes. When the two parties cannot agree on legislation, these party leaders help negotiate a compromise.

Next vote was the House of Representatives companion bill HB1006. With no time to spare, the FCF Board of Directors authorized funds to hire an electronic press release company to FAX the official FCF opposition to HB1006 to the entire House of Representatives and the Washington DC news media and the Washington DC branch offices of the various state capitol newspapers. The FCF letter can be read on the FCF web site under the Action Alerts section. I have followed up with phone calls to reporters and legislators to see if there is interest or additional information I can provide.

November 18, HB 1006 was placed on the agenda and a one-sided condemnation of all the accidents and animal abuse by bad cat owners dominated the 40-minute "debate" period. Roll call vote on November 19 received 419 votes in favor. This House bill returned to the Senate for additional wording to address the funding of this measure and after they vote in favor, it will return to the House for a vote and then the President must sign it into law.

Like any other bill, money and election campaign obligations played a significant role in the support of this bill. During my research on HB1006, I was told by Kurt Courtney, legislative aid to Buck McKeon that HB 1006 was heavily lobbied for by Tippi Hedren and the Humane Society of the US. He told me that he believed that Tippi truly cared about the fate of these tigers, however, he knew that the Humane Society was only using this as a platform to gain donation dollars and that Richard Ferranado, in his opinion, didn't care if these tigers were all put to sleep, this was just about money. The Public Relations firm assisting us told me that they will not take



on a client against an AR bill unless the client is extremely well funded. The Animal Rights movement is too big now to fight with a small budget. To mount an effective PR campaign to stop a bill it usually takes a minimum 3-month commitment and a budget of \$30,000 to \$150,000. We are clearly out of this league.

According to Norma Bennett, of the National Animal Interest Alliance, "The reason the bill passed is that HSUS and its allies have been courting Congress for years while exotic animal owners have either ignored the situation or played defense late in the game". One thing seemed clear; concerned animal owners, FCF members and the Phoenix Wildlife Internet community's efforts to make their views known to legislators seemed fruitless. My Congressman's legislative aid attended the Whip's assistant meeting the day prior to the vote and asked around on my behalf, but nobody acknowledged receiving any opposition to HB1006. There is no doubt that organizations with strong lobbying connections receive preferential treatments. And my state Congressman, the House Committee chair in charge of amendments and the House Majority Leader's office returned my calls only because I was the Legal Affairs Director of the Feline Conservation Federation, a national organization affected by this bill.

What will happen when the Captive Animal Safety Act passes and become law? Norma Bennet of NAIA reminds us "The bill does not actually become law until the regulations are written, approved, and published in the Federal Register. USDA has 180 days after the President's signature to write regulations that will describe people who are exempt. \*\*This is the best place for input\*\* — find out who is in charge of the proposal, then do everything possible to get your voice heard. The proposal will be put up for public comment, the comments will be studied, and changes may or may not be made before the regulation goes into effect." As the bill is written, anyone not USDA licensed, but state permitted to possess a cougar or lion will need to find an instate source if they wish to make a purchase. USDA licensed brokers will become important conduits for interstate sales now. In the case of tigers, leopards, cheetahs and jaguars, those species are endangered and it has never been legal to sell them in interstate commerce for pets. And when two USDA licensed facilities want to engage in commercial activity of endangered species, they will still have to gain a USDI interstate commerce permit, same as always. In the case of sanctuary rescue work — if there is no commerce involved, this bill has no effect and it seems very silly to even exempt them from commerce since they don't allow it anyhow. And for people relocating to a new state with an existing big pet cat — you are free to travel to another state if it will let you in. So it all boils down to a pretty hollow victory for the AR, but with all the misrepresentation in the press, they can crow and gloat as if they have stopped captive husbandry dead in its tracks. And they can build upon this victory in the next round — which is the remaining states that have yet to pass regulations.

## FCF ACCREDITATION COMMITTEE BEING FORMED

Dear FCF members,

At convention this year, the FCF board voted to approve a committee to develop a set of accreditation standards for our members who desired an organizational accreditation but did not want to be associated with or did not qualify for some of the currently existing accreditation programs such as AZA, ASA, and TAOS. In many instances it has been shown to us that professional accreditation has a greater impact for owners in both government and professional dealings.

The idea behind this committee is to develop a set of standards for all levels of our membership from the pet owner to the sanctuary to the breeder. We want all of our members who would like to be accredited to have the opportunity to do so, therefore this committee should be fairly large and represent all aspects of ownership. The committee is beginning to come together but we would still like more representation and suggestions from our membership. Your input is vital in making this program something that all members can benefit from and we are eager to get this project underway. Anyone interested in serving on the committee or even just making suggestions please contact Leann Montgomery at [LM4WILDCATS@cs.com](mailto:LM4WILDCATS@cs.com) or by calling 502-647-5945

We all know it is the states and their laws that have the power to force the extinction of the "pet" big cat. And now that the federal legislature has bowed to the AR's bidding, you can believe the states with no permit systems in place will be lobbied hard by them this next legislative season. I suspect Minnesota is a prime target, as is AR, WA, OR, NY, same as last year. The proponents of these ban laws are making connections, learning the ropes and gaining momentum. If FCF members in these states wish to continue to maintain their exotic felines it is strongly recommended that they stay involved with their local state representatives and gain a sponsor for the FCF model for state regulations. The strategy of "just say no" to the ban law proposals is not going to work in the future. FCF members must get proactive and must lobby for the FCF Model for State Regulations, which allows private possession and addresses animal welfare and public safety issues.

In order for the feline community to gain a listening ear with legislators we are going to have to put more energy and funding into establishing a presence with legislative bodies. And this will require personal efforts by our individual members and an expanded legal budget for FCF. We cannot afford the full-time services of professional public relations firms but we can, though printing and mailing FCF materials make our representatives aware of our good works, our conservation contributions, the husbandry courses and the FCF feline placement services. That will go a long ways towards balancing the impression being promoted by the anti-animal forces that there is nothing but abuse, neglect, escapes and accidents to the credit of private owners.

# Conservation in practice: Niche diversification in the bobcat, its role as a focal species in fragmented landscapes, and the umbrella species concept

Timothy John Mallow and Michele Kharbanda  
Coryi Foundation, Inc.  
Cocoa, Florida

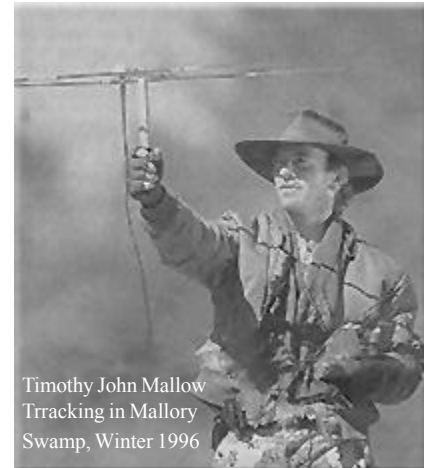
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**Introduction:** The bobcat (*Lynx rufus*) is the last wide-ranging terrestrial predator in many areas of North America. With the extirpation of the red wolf (*Canis rufus*) and Florida panther (*Felis concolor coryi*) from most if not the entire southeast, the bobcat is now the top wide-ranging terrestrial predator in that biome. More importantly, its absence as a top predator may result in large-scale ecological problems. The disappearance of predators tends to set into motion a cascading series of catastrophic events that seriously upset animal community balance. As an example, because of the disappearance of the red wolf and panther from most of the southeast, mesopredators such as raccoons (*Procyon lotor*) have become overpopulated. In turn, their overpredation of sea turtle eggs along Atlantic beaches has led to a significant drop in the survivorship of young turtles and the threat of extinction (Breining et al. 1994).

Bobcats may be considered the best natural regulator of rabbits (*Sylvilagus spp.*), cotton rats (*Sigmodon hispidus*) and other rodents in the wild (Wassmer et al. 1988, Maehr and Brady 1986). The combined occurrence of rabbit and cotton rat components alone, as found in bobcat stomachs, is 66-78 % throughout the year and are the most important foods during all seasons. Cotton rats, other small mammals, and birds account for over 50% (aggregate). It is estimated that over the course of one year one adult male and two adult females that occupy a range 5000 acres in size will consume 501 cottontail rabbits (*S. floridanus*), 1924 cotton rats, and 4167 cotton mice (*Peromyscus gossypinus*), for a total of 6592 prey animals (Mallow 2002). If these two females reared litters of three kittens each, then the total prey consumed by these nine bobcats over a two-year period in that 5000-acre tract would be 19,462 (Mallow 2002). These facts appear to make the Florida bobcat a specialist and efficient regulator of small mammals (Maehr and Brady 1986). Without the bobcat, these prey populations could increase and over-forage their food resources. Disease and starvation could eventually spread throughout those populations. With it, an increase in zoonotic diseases may occur. Other unknown consequences may occur. In a cascading effect, communities that were otherwise stable could spiral out of balance. Thus, it is advantageous and critical to retain viable bobcat populations where prey species exist. In this capacity, robust bobcat populations are assets to ecological stability.

The bobcat is considered a focal species in the state of Florida (Cox et al. 1994). By the definition of that citation, a focal species either requires suitable habitat conditions covering large areas or is an indicator of natural community health and biodiversity. Though bobcat home ranges are significantly smaller than those of Florida panthers and black bears (Maehr 1990, Wooding and Hardisky 1994), on a smaller geographic scale their wide ranging characteristics suggests that retaining viable cores of bobcat populations would umbrella other species. For instance, based on a mean density of 17 adults per 100 square kilometers (Mallow 2002), and a target viable population number of 200 adults (Cox et al. 1994), roughly 454 square kilometers (291,000 acres) of composite protected habitat would be required for sustained population persistence in the long term. If cores on this scale can be retained, then many smaller organisms will automatically benefit. Furthermore, though the bulk of its diet does consist of lagomorph and cotton rats, bobcats do feed from a wide variety of other small mammals, birds and reptiles (Wassmer et al. 1988, Maehr and Brady 1986). Thus, the bobcat does exhibit some generalist-like features when it comes to prey. I.e., it is quite adaptable to different habitats and prey. Curiously, this generalist-like aspect may also imply some degree of biological diversity in areas where bobcat populations exist.

In the modern world, landscapes have gradually been transformed from being largely undisturbed to consisting of a mosaic of natural and developed areas. We are now faced with the reality that remaining natural areas are small, fragmented, provide little protection beyond the life of individuals or a few dwindling generations that presently constitute a



Timothy John Mallow  
Tracking in Mallory  
Swamp, Winter 1996

population, and must be protected and connected in some way in order to allow breeder movement (Nemark 1985, Schonewald-Cox 1983, Salwasser et al. 1987). Without habitat connectivity, small isolated populations experience increased inbreeding, loss of genetic diversity, reduced resistance to disease, lowered reproductive potential, and physiologic impairments (some fatal). Collectively, these anomalies can lead to local extinction.

Unfortunately, population isolation is rapidly becoming the rule in Florida landscapes, as well as in many places in North America. Protected lands in Florida in the future will most likely be butted up against or within the confines of moderate developments, or possess some level of internal fragmentation. They could be comprised of habitat patches of various sizes. Furthermore, it must be pointed out that even 100,000 acres of contiguous protected habitat is hard to come by in Florida and most eastern states. Therefore, conservation strategies for wide-ranging species as bobcats will most likely need to incorporate a metapopulation approach as an alternative strategy to maintaining genetic and demographic viability in landscapes that are fragmented by development.

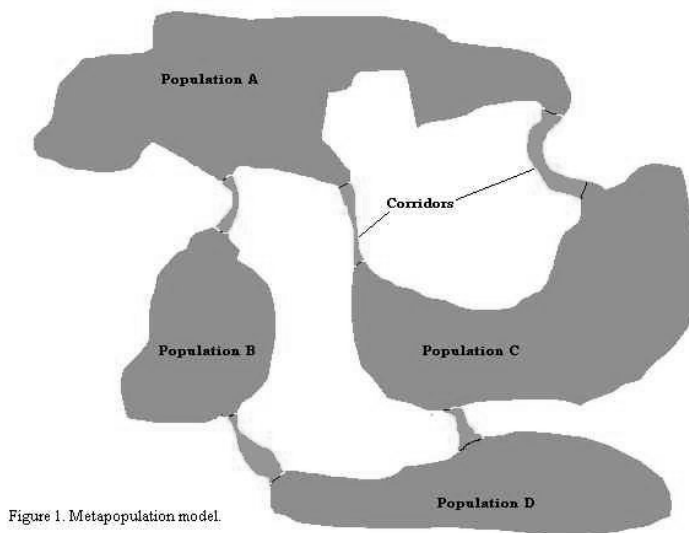


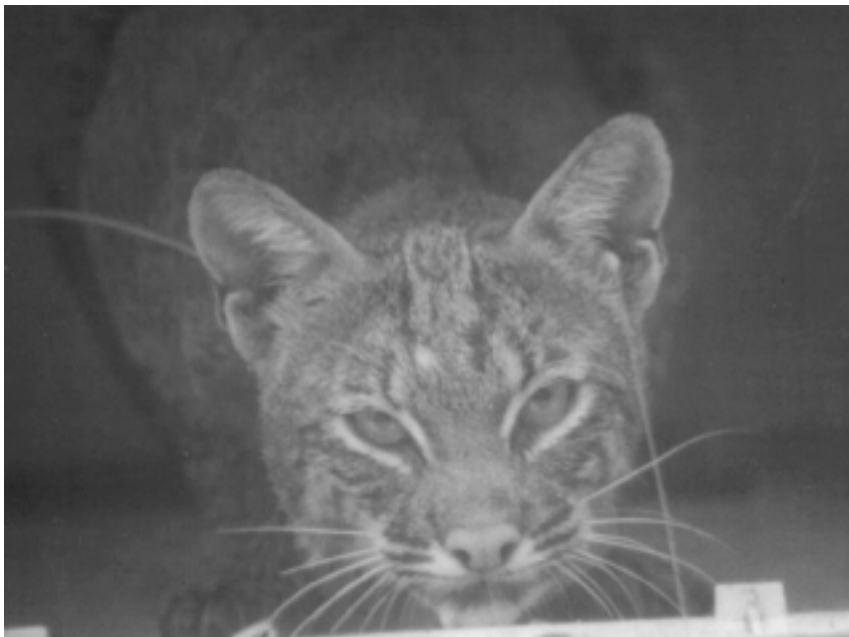
Figure 1. Metapopulation model.

A metapopulation consists of a number of geographically separated core populations that are interconnected by a network of travel corridors (Figure 1). The cores by themselves are not large enough to allow a species to experience reduced inbreeding and sufficient genetic variability. However, if they are linked via corridors, inbreeding effects can be suppressed via the movement of breeding individuals between the cores. Cores of populations that are linked via corridors also act as sources of individual replenishment for other cores, via immigration and emigration. The net effect, from a genetic and demographic standpoint, is that a landscape comprised of a collection of population cores that are linked together via movement pathways effectively functions to meet the needs of what can be considered a single viable population. This approach is attractive because the population does not need a single large protected area. Furthermore, these corridors and small cores can exist within a developed matrix.

Insuring the survival of a focal species can also optimize large-scale biodiversity. A focal species is one that is wide-ranging and utilizes a diverse array of habitats and food resources. Protection of a focal species insures protection of most other species that exist within its scope of geographic range, without duplicated effort. In this paper we examine the diversified niche of the bobcat in its community. We present the concept that as a focal species, the bobcat utilizes a wide variety of habitats and species in such a way not replicated by most animals. We intend to provoke an understanding that the bobcat can serve as a model for large-scale community integrity and the maintenance of biodiversity. We will develop this idea using two ecological aspects: habitat utilization and density. In the end, we demonstrate that because the bobcat is wide-ranging and utilizes a wide variety of habitats, maintaining its viable presence in an area can automatically insure the protection of many species without duplicated effort.

**Methods:** We approached this task by developing a quantitative measure of diversification. First, we identified all the species that are utilized as prey by bobcats and certain non-prey species considered wide-ranging in Florida. We examined the frequency of prey consumed by bobcats in order to identify the habitats used by the most consumed prey. This approach was intended to reveal bobcat habitat important for food acquisition. Prey frequencies were obtained from Maehr and Brady (1986) and Wassmer et al. (1988). Values are the sums of frequencies identified from stomach contents and scat samples in those two studies. All bobcats and scats were collected in Florida. We limited the non-prey wide-ranging species to those that are focal in order to simplify the analysis. There are over 500 vertebrate taxa in Florida. To conduct this analysis on all vertebrates would be time-consuming and largely unnecessary. This is chiefly because we only needed to compare the bobcat with non-prey species whose individuals have the ability to cover a large amount of land space. Next, we identified all the habitats that are used by bobcats, their prey and the other focal species from a variety of references. We classified these habitats according to the land-cover classifications provided in Cox et al. (1994).

To provide a quantitative measure of niche diversification for each species, we calculated the ratio of the number of habitats used by each species to the total number of habitats found in Florida. This ratio we call the habitat diversity score (HDS). We then calculated the ratio of the inverse of a species density to the inverse of the smallest density found



Miss Westerly  
Mallory Swamp, FL  
May 21, 1996  
Photo copyright Timothy John Mallow

**Results:** Cotton rat remains found in bobcat scat and stomachs account for the highest frequency at 39.0%. Cottontail rabbits rank second at 25.3%. Marsh rabbits (*Sylvilagus palustris*) rank third at 6.5%. All other species collectively comprise 29.2% of the samples. Mammals account for 92% and birds 8% of all prey types. The total number of mammals and birds preyed upon are 19 and 15, respectively. The only reptile found in the samples was the pygmy rattlesnake at 0.2%.

Bobcats and black bears rank 1st (16) and 2nd (15), respectively, in terms of the number of habitats used. Interestingly, these two species virtually use the same types of habitats - both wet and dry. However, it must be pointed out that neither uses marshes. The Carolina wren and wild turkey rank 3rd (13) and 4th (12), respectively. The panther uses a median number of habitat types (8). Prey species can be found in both wet and dry habitats. However, cottontail rabbits and cotton rats, which are preyed upon the most by bobcats, are limited in their distribution to early successional and relatively dry habitats (grassland, agriculture, and shrub/brushland).

With regards to density, the wide-ranging focal species clearly exhibit the lowest densities, and hence occupy the largest home ranges. Hence, their classification as wide-ranging species. Panthers and black bears ranked 1st and 2nd, respectively. Bobcats, sandhill cranes, and swallow-tailed kites all nearly ranked similarly in 3rd position. The crane and kite, however, are limited in the number of habitats occupied (5 and 8, respectively).

The species that possess an NDS greater than 0.7 are the Florida panther, black bear, and bobcat. These species scored 1.33, 0.75, and 0.71, respectively. Turkey, raccoon, kite, and crane rank 4th (0.50), 5th (0.46), 6th (0.38), and 7th (0.25), respectively.

**Discussion:** The bobcat shows a strong inclination for preying on small mammals, hence, its classification as a small mammal specialist. That birds only account for 8% is probably indicative of the ease in capturing non-flying prey. The bobcat

among all species. This ratio we call the density score (DS). Each score for each species was expressed as a fraction of unity. For each species we added the HDS to the DS. This sum we call the niche diversity score (NDS). The intent of this approach was to show that the species with the highest NDS are those that, collectively, are the widest ranging and use the greatest number of habitat types - those that make the most robust use of the landscape. Those species that rank the highest we consider to be true focal or umbrella species. What was implied was that a true focal or umbrella species should not only range the farthest, but should also utilize a high number of habitats.

uses most natural habitats. The only disturbed types it can use are shrub/brushland and certain types of agriculture (e.g. old fields). Disturbances can either be man-made such as the result of clearing, or natural such as those caused by lightning-induced fires. Either way, these habitats are in the stages of early succession. They exhibit appreciable herbaceous, shrubby, and sapling growth. It cannot be emphasized enough that cottontail rabbits and cotton rats are found in their greatest abundance in these types of habitats (Golley et al. 1965, Myers and Ewel 1990). That bobcats consume these prey types significantly the most suggests that bobcats prefer drier and early successional habitats the most, at least for food acquisition. This is the case despite the fact that the bobcat can make use of less prey-productive habitats, including upland and wetland forest. Bobcats have been found to prefer dry and early successional habitats in other studies; and bobcats that occupy ranges with appreciable amounts of these habitats are heavier in weight (Mallow 2002). These facts suggest that drier habitats that are managed for adequate amount of early stages in the sere are important requirements for adequate nutrition and good health. Forested communities are also preferred. They are important habitats for denning and travel (Mallow 2002). Ideally, optimal bobcat habitat should consist of a mix of natural communities that exhibit all stages of the sere - sufficient forest cover adjacent prey-rich early successional areas. Such would also promote maximum biodiversity (Mallow 2002). That bobcats do not make significant use of marshes dispels any notion that riverine floodplain marshes are suitable as travel corridors or cores.

The niche diversification scores suggest that bobcats occupy the widest reaching niche in natural communi-



ties that are void of the panther and bear. The Florida panther and black bear are true focal species in regions that have sufficient space. However, their large home range requirement prevents them from acting in that capacity in most of the southeast. On the other hand, the smaller home ranges of bobcats allow them to survive in smaller natural areas.

Based on this review and analysis, we suggest the idea that in fragmented landscapes that have reduced amounts of natural areas, the bobcat can serve as the alternative focal species, and one that is an important regulator of prey, in particular, small mammals. Furthermore, we suggest that as it exhibits the widest use of habitats and is wide-ranging, bobcats serve as an ideal model for large-scale biodiversity. Retaining its presence in the fragmented landscape insures the presence of many other species without duplicated effort. Indeed, habitat management efforts can efficiently promote maximum biodiversity by employing conservation strategies on the scale of the bobcat. However, it must be pointed out once again that the bobcat is a wide-ranging species. Any attempt to use it as a tool for the promotion of large-scale biological diversity must be tempered with suitable habitat management guidelines. Furthermore, these guidelines must be sufficient to insure that the bobcat can carry out all of its life history functions, especially with regards to those involving suitable cover and prey resources. Equally true, there are many species that possess more stringent habitat requirements. For instance, gopher tortoise and indigo snake possess a preference for sandhill communities. Scrub jays require low trees away from tall timbers from which raptors can view the lower vegetative layers for prey opportunities. These examples demonstrate that if a focal species is to be used as a barometer of biodiversity then any plans for habitat preservation must take into consideration the life histories (e.g., food and habitat requirements) of other species.

### ***Conclusions and implications for large-scale conservation***

What is needed in modern conservation practices is the development of habitat management guidelines that address the needs of wide-ranging species that have the need for upland habitats and large space. Efforts must focus on severely fragmented landscapes or areas for which the last line of defense in terrestrial prey regulation and the maintenance of biodiversity reside with remaining upper trophic level top predators such as the bobcat. Research is equally needed to obtain ecological information on bobcats in these landscapes in order to generate valid and useful habitat management guidelines that can meet their needs in a metapopulation environment. The data obtained from pure and application research can be then used to formulate and implement wise landscape management policies. Whereas the data presented here addresses species and habitat parameters of the Florida land-

scape, its application is inclusive of all of North America wherever large carnivores remain, and in particular, where the last large carnivore remaining is the bobcat.

Bobcats, along with panthers and black bears, exhibit the highest niche diversification scores. That is to say, they collectively use the highest number of diverse habitats over the largest areas, compared to all other species. These results suggest that where conservation measures focus on wide-ranging large carnivores of North America, an automatic (umbrella-like) coverage of protection for all other species found within their ranges can be significantly accomplished without duplicated effort of measures to protect species that occupy smaller ranges and use fewer habitat types.

The niche diversification concept as put forth in this paper is a characteristic of Felidae species in general. This characteristic is rooted in the life history traits of large carnivores that require large spaces in order to survive at population levels. In the process of defending large territories, these species encompass a maximum use of habitat types. The long-term persistence of large carnivores depends on the availability of large masses of land that sustain equally persistent prey species. A case in point is the imperiled Florida panther. Eastern cougars once thrived in all states east of the Mississippi River. Through widespread habitat loss and bounty, the only remnant population is confined to the southern tip of Florida. There, 50-70 individuals hang on precariously under the threat of extinction catalyzed by the biomedical anomalies brought about by inbreeding. They occupy roughly 2.2 million acres of land (Land et al. 1998). Because the population is confined to southern Florida, with virtually no expansion outside its range, inbreeding has taken its toll. For those 50-70 individuals, 2.2 million acres is insufficient. If the population could expand northward, then inbreeding effects could be reduced, and the race could be allowed to persist without genetic introgression by Texas cougar introduction (Land et al. 2003). And even though this solution is not the best long-term solution, as long as conservation genetics measures are employed to keep the race going, all other species (panther prey species included) in the south Florida ecosystem will thrive. This is because the conservation measures being employed include the protection of major land systems (Big Cypress National Preserve and Everglades National Park) in which the panther population resides. No developments can occur within their boundaries. Thus, species enrichment, diversity and abundance on a large scale are given the best advantage for survival where large carnivore populations are able to thrive. An alternative way to view this is to recognize that large carnivores are barometers. I.e., where a population of large and wide-ranging carnivores exists, so too does a healthy assemblage of flora and fauna, generally speaking.

In places in North America where cougar are absent, it is directly attributed to the loss of large blocks of protected and unaltered land (on the order of millions of acres per block) as a result of habitat fragmentation associated with an increase in farms, ranches, and residential areas. Barring a reversal of the current landscape profile, that is to say, since we cannot

readily retro-convert ranches, farms, and suburban areas to their former wild state, the next best option for sustaining the remaining biological diversity is to maintain habitat integrity for the remaining large carnivores. These large carnivores include species such as bobcat, black bear, and red wolf.

Since most landscapes in many places of North America are still patchy and fragmented on the scale for carnivores such as bobcats, whose space requirement is less than that of cougar, metapopulation measures are needed to link together with corridors the isolated populations that reside in large tracts of land. And the same benefits offered to bobcats through corridor management will also benefit many other species for the same reason: gene flow and replenishment of sink population centers with an influx of individuals from other core areas.

Over the last thirty years, much research has been conducted on the viability of corridor-linked lands in maintaining species persistence and genetic health. Only in the last decade or so has more attention been placed on this relatively novel approach to conservation. Much controversy surrounds the subject. Opponents fear that corridors facilitate the spread of wildlife diseases and are a limiting answer to the problems faced by species subject to genetic and demographic instability. Their solution calls for the retention of all large lands that are undeveloped, itself a worthy objective. Proponents of corridors point to the benefit of gene flow between large tracts of land and populations that are isolated. Given the incredible reduction in large lands in North America, especially in the east, that are needed to support viable large carnivore populations, society is now forced to not only consider corridor theory and application, but to also implement it. Along this line of reasoning, municipal governments must revise conservation ordinances to include the protection of wildlife corridors. And in fact, many are. It must finally be mentioned that corridors are only useful if they in fact interconnect the larger tracts of undisturbed land in which the large carnivores reside.

In the end, if such proactive conservation measures can sustain metapopulations of bobcats and other species, then such barometers of ecosystem health will continue to demonstrate a persistent level of biodiversity across many habitat and fauna niches. Conversely stated, a lack of top predators in any ecosystem is a strong indication that habitat niche diversity and space has likely been severely reduced.



**In the field, 2001**

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## A PIRATE'S LIFE

by Mollie Hogan

The Nature of Wildworks was established in 1995 as a non-profit wildlife care and education center in Topanga, California dedicated to the lifelong quality care of non-releasable wild animals. Our 501(c)3 organization came into being when a native wildlife presentation at The Los Angeles Zoo (Wild in the City) was suddenly cancelled and the show animals had to be relocated. As an employee of the zoo, I had worked with these animals for many years, raising some of them from infancy and training them to participate in public programs. I realized that their relocation would be difficult. Hand-raised wild animals normally bond to the people who raise them and are often unable to be housed with other animals or to adjust to exhibit situations where contact with humans is often discouraged. I was very concerned about the future of these individuals so I decided then to work toward acquiring the animals and to continue the work that we did at the zoo utilizing them for educational outreach programs.

California has strict wildlife permit requirements and although I had the necessary experience I was faced with a long waiting period. Fortunately, I was also a part-time instructor at The Moorpark College Teaching Zoo in Moorpark, CA and I was able to transfer the animals from the L.A. Zoo to Moorpark where the students cared for them and worked with them while I pursued their legal relocation.

It was a long two years, but in 1995 "Phoenix," the male mountain lion, moved into my backyard!! Shortly thereafter the other show animals arrived and many more have come to make Wildworks their home over the years. We currently house a wide variety of raptors, mammals and reptiles native to California, as well as exotic animals such as servals, kinkajous, bat-eared and fennec foxes. These animals participate in on-going educational outreach programs for schools, wilderness parks, and community and private functions to teach people about wildlife, the wilderness, animal care and behavior and environmental issues.

Wildworks is my dream come true. I've always considered it a wonderful privilege to be a wild animal caretaker and educator. I was lucky to acquire the zoo animals that came to Wildworks as healthy individuals. Also, our six-year-old female cougar "Envy" was confiscated at 6 months as an illegal pet. Though she was in perfect health, her owner simply lacked the proper permits to house her. We also recently acquired three baby animals from credible breeders to train as wildlife ambassadors: a bobcat named "Thunder Kitty", a fennec fox called "Foxy" and two coyote pups named "Trickster" and "Mesa." They arrived at Wildworks as workable, healthy critters.

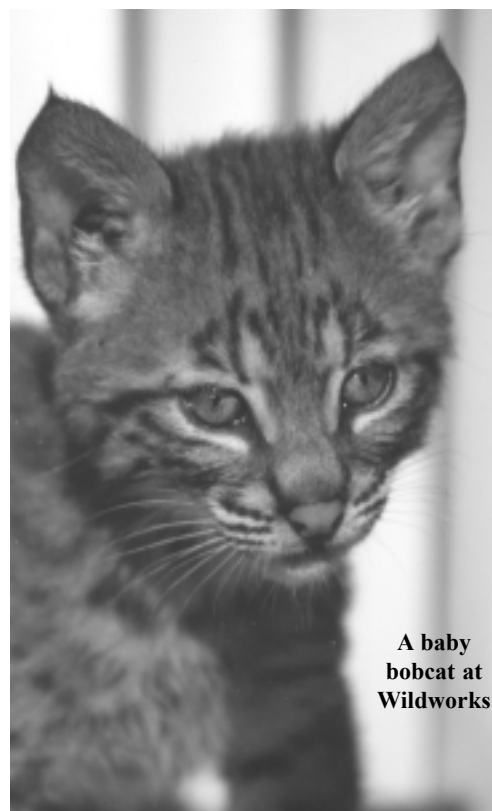
Unfortunately, that isn't always the case. Not all pet owners are responsible, not all animal care centers really care and animal abuse and neglect can happen anywhere. Wildworks has received a serval with broken limbs caused by rickets from being fed an improper diet and several cats crippled from being declawed.

But in all my years of experience I've never had an animal come into my care in such atrocious condition as a young cougar we call Pirate.

Pirate arrived at Wildworks in September at the age of 8 months, weighing in at only 20 pounds. His spine and hipbones were protruding and the pads on all four feet were raw and bleeding. His fur was rough and patchy, the tip of his tail was missing and his right ear was notched, probably from a fight.

But to add insult to injury, the worst of his problems was his eyes. The right eye was ten times its normal size and the left eye had been injured. It was obvious that Pirate couldn't see very well and the pain and blurred vision made him suspicious and frightened. The following day he was examined by our veterinarian and an animal ophthalmologist was called in. Pirate was diagnosed with severe glaucoma in his right eye, a condition normally found in older animals, causing pain much like a migraine headache. His eye was so enlarged that it was removed the same day. When he awoke from anesthesia he was immediately feeling better, purring and meowing like a normal kitten.

We watched Pirate closely and after a week in the house his paws healed and he started gaining weight. We took him back for a recheck and upon further





examination of his left eye it was confirmed that his retina was detached and there was mild glaucoma. We are able to treat the eye with drops to keep the pressure at bay but unfortunately his vision will never be restored. Pirate is completely blind.

What kind of life is in store for a blind mountain lion? Because all cats rely so heavily on their vision, at first I was concerned about his quality of life. But after working with him and observing his behavior for two months now I think he'll be just fine. Not unlike a blind person, his other senses have taken over. I'm amazed at how well he gets along. He lives outdoors in a big enclosure and he's learned the boundaries of his cage and the location of food and water, toys and humans. His feet step lightly and he points his nose upward when he walks to smell what's ahead. He calls to us and the other mountain lions when he hears our voices. The toy that seems to work best for him is paper towel rolls that he can easily bat and grab again with his claws. He most definitely recognizes individuals by voice, scent and even the sound of different footsteps. But this is what I find to be most interesting. When I sit down in his enclosure he walks over to me purring and then immediately locates the back of my neck. He doesn't bite it (yet!) but instinct definitely tells him to go there. Amazing!

Pirate is already going to programs and he's a great working animal. We use operant conditioning and work him for treats and because he's unable to see and is not stimulated by movement he is very safe to handle in public.

There are so many lessons the public can learn from Pirate!!

Even though cougars exist here in the wild in southern California most people have never seen one. I often receive calls from people who are mistaking bobcats for lions. Here in the Santa Monica Mountains a lack of wildlife corridors is severely limiting cougar populations. The National Park Service has been studying pumas in this area for a few years now and only three have been located and radio-collared. Our captive Wildworks lions have been used to test scent lure preferences and have helped with this tracking project. Grizzlies and wolves have long since disappeared and as the top predator in these mountains it is extremely important that the cougar continues to survive here.

At Wildworks we never declaw our cats, but some were declawed prior to their arrival. Because it is always painful and can often cause permanent problems, repair surgery has recently been developed by Dr Jennifer Conrad and all of our declawed cats are on the waiting list for this procedure. It is simple to teach any cat to not use its claws and Pirate can be used to show people how it's done.

As a disabled individual who works hard and purrs constantly, Pirate can teach children and adults that disabilities don't have to be limiting. Animals don't laugh at each other and point a finger like we humans often do. They don't even seem to recognize their disability as a problem or limitation.

Blind mountain lions are better listeners. I'm sure we can all learn that lesson!

And maybe the most important thing that Pirate can teach people is how to care. Pirate came from out of state and his history is unclear. I know he was transported here by an individual who bought him but then couldn't legally house him in CA. I've been a professional in the animal field for over



**A serval resident of Wildworks**

twenty years and the facilities and individuals that I would normally come in contact with are responsible and credible. Obviously, Pirate came from a different kind of place.

Fortunately, our little cougar is here at Wildworks now and he'll receive all the care he requires..for the rest of his life. If ever an animal needed and deserved lifelong quality care, it's Pirate.

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# **WILD FELINE TRAINING SERIES: CRATE EXPECTATIONS**

**By Jessi Clark-White**

You can approach this training task in either of two ways, depending on your feline's current attitude towards carriers.

## **CRATE TRAINING A FELINE WHO IS AFRAID OF CARRIERS... OR JUST PLAIN HATES THEM**

If your cat is afraid of crates or just plain hates them, the best approach would be to use classical conditioning in the form of desensitization and counterconditioning. The initial training goals are to get the cat used to being around the crate (desensitization) and to change his emotional response to being crated from negative to positive (counterconditioning).

One approach to this is to simply put the crate in your cat's living quarters and begin feeding him all of his meals in it. If he's is reluctant to approach or enter the crate at first, place the food in the crate, leave the door open, and let him approach at will. If he will not come anywhere near the crate after several hours, remove the food from the crate and feed him near it. Over time, serve the food closer and closer until he is eating in the crate.

### **TRAINING TIP**

If your cat has a strong aversion to one type of crate because of prior bad experiences, you might be able to save yourself a lot of work by simply getting a different kind of crate. If he hates plastic airline crates, try a wire one or vice versa.

After a while you should reach a point where your feline enters the crate as soon as you put the food in it. Pick a cue word for entering the crate, such as "Hop in," or "Crate." Your next step will be to put the food in the crate and close the door, locking the cat out. Wait a minute until he starts sniffing or pawing at the crate wanting to get in. Then give your cue to "Hop in" and open the door.

After you have done this for a while and your cat seems comfortable, you can start closing the door for short periods of time while he's eating. The next step will be to place only a small amount of food in the crate, cue him to enter and open the door, and then lock him in. As soon as he finishes the food inside the crate, start feeding him the rest of the meal "through the bars." This will start building positive associations not only with entering the crate but also with being shut inside it.

At first feed him rapidly, piece after piece, then let him out. But over time, you can stretch out the time between morsels of food until you are simply wandering up every five minutes or so and feeding him a treat.

Other ways to build up positive associations with the crate:

- If the cat is kept outdoors, place a warm heating pad in the crate (SnuggleSafe disks can be heated in a microwave – no cords!) to make it the coziest spot in his den. In the summer, try ice in a towel.
- Make a crate the cat's den box temporarily so he gets used to resting in it and treating it as a safe haven when scared.
- Play games with the crate, leading him inside it with a toy and letting him catch it inside the crate. You can also lock him in the crate and give him a favorite toy to play with.

When the cat will enter the crate voluntarily and is comfortable being confined in it, you may consider your counterconditioning complete. You can stop here if you like, or progress to the operant conditioning stage in order to teach him to enter the crate on cue when there isn't any food in it.

## **CRATE TRAINING FOR KITTENS, CUBS, AND RELUCTANT ADULTS**

If your cat is a kitten or has no particular hatred of carriers and you simply want to be able to call him in quickly on command, then you are best off using an operant conditioning approach to train him to enter the crate for a reward. You can also progress to this stage with a formerly fearful feline after you finish your initial counterconditioning.

### **TRAINING TIP**

If you have a big training task, break it down into smaller pieces and work on those individually before combining them for your final product. The crate training process is broken down into entering the crate, entering the crate on cue when the door is opened, having the door closed behind him, and being locked in the crate for extended periods of time.



Dig out your clicker and treats and sit down next to the carrier. Start off by clicking, then tossing a treat into the crate. Do this a few times just to give him the idea. Then simply sit there and wait for the cat to make the next move. Any time he makes a move towards the crate, click and toss a treat into it. As he becomes more inclined to move towards the crate or step inside it, click these new efforts. Soon, he'll figure out that stepping into the crate is what earns the click and treat. Then, wait for him to walk all the way in before you click.

Once he'll enter the crate readily, choose a cue such as "Hop in" and begin using it whenever you see him about to enter. The next step is to begin with the crate door closed. Walk up to it, open the door, say "Hop in," and close the crate door once the cat enters. Click and give a big treat. Repeat the process several times a session.

What I've outlined here are two basic training plans. However, the great thing about being familiar with basic learning principles is being able to use your imagination and knowledge of your individual cats to design your own training program. If your plan effectively creates a positive association with being in the crate and establishes a cue to enter it, you will succeed. There is more than one way to train a cat!

**Jessi Clark-White** is a dog behaviorist, emergency dispatcher, and exotic cat owner.

Past articles in the wild feline training series can be found on her web site,

[www.AfricanServal.com](http://www.AfricanServal.com). She is currently writing a book on care, training, and the politics of living with servals. Article copyright 2003 by Jessi Clark-White. Ideas for future article topics can be emailed to [jetflair@eudoramail.com](mailto:jetflair@eudoramail.com).

### TRAINING TIP

If your cat won't approach when you are standing next to the crate because he's afraid you're going to lock him in, start by placing the food in the crate and retreating until you are far enough away for him to feel comfortable approaching. Note this distance and systematically decrease it by a foot or so each day until you are standing next to the crate.



## CRATE FRUSTRATION

When we relocated our facility we had no problem crating up the animals we had hand-raised for transport. After all, for them crates had always meant going back inside to have dinner, or sleeping in a warm and cozy place. For the animals we had not raised, crates meant travelling, veterinarians, and separation from the safe and known.

We always tried bribes and patience first, especially with the cats who are most easily frightened.



When that failed, we resorted to getting out the nets. Since we were moving we let the grass grow up for them to play in, making netting very difficult. Fortunately these cats always seemed to know what a net was, and we rarely actually had to do any netting. Generally once they saw the nets they dove for the safest nearby hideaway--the crate.

--submitted by Mindy Stinner



# Dealing with Dying and Death

by Lynn Culver

Our first cougars, Mercury and Tara, were a bonded breeding pair and July 13, 1988 on a beautiful summer day Tara gave birth to their first litter of three sons. Together we raised Cinnabar, son of Mercury; Sharu, Arabic for Regulas, the heart of the constellation Leo; and Arjan, named after my hero, Billy Arjan Singh, conservationist in India who raised and released Tara the tiger and a pair of leopards named Harriet and Juliet back into the wild.

We buried Cinnabar last month, on October 15. His last meal was October 8, and from that day forward, he had no interest in food and I knew in my heart it was his time to leave us. As much as I loved him, I was able to accept this because his best days were behind him already. He had suffered a serious compromise in his back two years prior. One day he appeared partially paralyzed, his tail was limp, and he was unable to rise to the balls of his back feet when he walked. Instead he put weight on the entire lower leg and his back hung low. A trip to the veterinarian for X-rays revealed the spinal location of the problem, but the cause was unclear. Steroids did not solve the problem. A course of tetracycline to treat a possible spinal infection did not solve the problem. An MRI and possible surgery on his spine were the only option; expensive, invasive and without guarantees that he would be better. In fact postoperative care needs were possibly going to involve catheters. It was not an option we felt was favorable considering his advanced age of 13 and his obesity that made him a less than perfect candidate for spinal surgery.

On the day he had been scheduled for the MRI, which was a month after the initial paralysis, he finally moved his tail and so began his slow but natural recovery. For the next two years, he had his good spells and some relapses. He never again jumped onto the tower that Bart constructed these boys. And the only time he quickened his pace was for the sight of dinner. I put him on a diet to lessen the strain on his back but he refused to lose weight. And then I hardened my heart and put him on a more serious diet to try to give him relief and more freedom of movement. Cinnabar loved food; it was clearly one of his greatest pleasures in life. But for his own good I denied him that indulgence.

About a month prior to his anorexia, I noticed that he had lost a lot of weight suddenly. The flab between his two front legs was now an empty fold of skin. His front legs reminded me of an old grandpa, bony and seemingly bowing from bearing the massive weight of his girth. And his spine was visible, even though he still had plenty of stomach fat. He belly seemed very swollen and I worried that he might be accumulating fluids in his abdomen. And so when he stopped eating, I knew in my heart he was very ill and I suspected cancer.

When he didn't want dinner the second day I administered all the fluids I had on hand – about 500 ml of lactated ringers and 100 ml of 5% dextrose sub-Q and the following day I drove to town to purchase more fluids. That was Friday and he received another 2 liters of fluids to get him through the weekend along with shots of B complex and amoxicillin. And I spent a lot of time with Cinnabar that weekend, just sitting beside him under the shade of the beautiful trees that filled the woods that he knew as his home. He was so gentle and loving to me, and I stroked his fur and his beautiful face and assured him of my love and devotion to him.



It wasn't until Tuesday that Dr. Adney would be at work. So Monday afternoon we loaded him to the transport cage, pulling him into it by his leash. He was unable to resist the strength of our combined efforts. We drove the 70 miles through the Ouachita Mountain forest to Hot Springs on a warm and colorful day. The sky bright blue, the clouds had silver linings and the trees were just beginning to sport their fall colors. It was beautiful day to be alive.

Dr. Adney drew blood from Cinnabar and told us his bilirubin was high indicating liver malfunction and then pulled a pink fluid from his peritoneal cavity and announced this was not normal and after examining the cells under a microscope and seeing that many of the cells looked abnormal, he felt strongly that we were indeed looking at cancer, most likely of the liver. The news was not all that shocking, though I had managed to submerge such thoughts into my sub-consciousness as we drove to the vet for help that day. But it was news that meant the only help we could give Cinnabar was to save him from the suffering that was sure to lie ahead.

The reality hurt, but the decision did not take long to make. My only regret was that he was in a city parking lot instead of his beautiful woods. But we had said our good byes over the weekend, and I had to accept that he was going to leave this beautiful planet forever and the important thing was that we were there for him. I crawled into his cage with him and spent the next half hour comforting him and myself.

: Lynn and Cinnabar in his younger days

And then it was time and Dr. Adney injected sleep away into a vein in his forearm and Cinnabar's life forces left his magnificent body. His necropsy revealed that indeed, cancer had ravaged his liver. His body is buried in his exercise yard; beautiful quartz crystal rocks surround a flowerbed planted above him.

Cancer can be beaten, Sharu proved that 4 years ago. One day we noticed he had a growth just inside his nasal passage. It appeared to look somewhat like cauliflower. We drove him to a vet to take a biopsy. The vet removed most of the growth, but not all, and the pathology report came back mexosarcoma, a deadly diagnosis. It would metastases into his lungs and other organs and conventional radiation and chemotherapy was not an option with a 200-pound cougar. His life expectancy was six months and we were devastated. Bart bargained with God and six weeks later the growth was noticeably smaller and it eventually totally disappeared. The cancer went into spontaneous remission and today he has outlived both his brothers.

When Arjan stopped eating November 14, I was faced with fighting the liver wars all over again. His behavior had changed; I noticed he seemed more prone to spend time deep in his woods. And the first night he showed no interest in food I wondered if the cow leg bone I had given him the day prior had been enough to last two days. But the following day I found him laying down next to berry brambles and the leaves on the forest floor looked incredibly matted down, as if he had been there all day and all night. And I asked him to come meet me by the fence, but he refused to rise. And his belly looked ominously large. Arjan is a physically fit specimen, all muscle with only a healthy layer of body fat. He has only been ill once in his life; a bout of some sort of stomach virus two years ago that, over the course of 10 days progressed into a twisted intestine. Our local vet made a house call and then after 8 days of no eating I drove him to Dr. Adney and was assured I would see improvement in 3 days, but I knew in my heart Arjan had something more than a virus, and I suspected a block. When I brought him back two days later and insisted on an x-ray, the twisted intestine was visible. Emergency surgery saved his life. Dr. Adney was guarded on Arjan's recovery though, because during surgery he observed that Arjan was also suffering from pancreatitis and showed signs of fatty liver disease. However, the very next day he ate a normal meal and from that day forward never showed any signs that his digestion was impaired.

For so many ailments, anorexia is the first symptom. Not only did Arjan suffer from this intestinal virus but so did 4 other of our cougars, and each fasted for between 8 and 21 days. Mercury did not eat a bite of solid food until the 18<sup>th</sup> day and then it was only six little 1-inch cubes for several days. On the 21st day he finally chewed a one-pound chunk of meat. Since Mercury was 17-years old at the time, we figured that in addition to the virus he must have cancer as well. We administering lactated ringer's solution sub-Q, but otherwise left him with Tara for company and comfort and just monitored to determine when we needed to put him to sleep. It was indeed amazing when he started eating again, and that experience is something I am often reminded of when faced with anorexia.

I planned to take Arjan to the veterinarian on Monday, however it was a cold, rainy day and not suitable for such a long drive. Tuesday we visited my local vet for blood work, X-rays and ultrasound. Arjan did have fluid in his abdomen and I feared it was a liver problem as well. Ultrasound revealed something that was either fecal matter, or a tumor. The next day we drove to Dr. Adney for a barium X-ray and hoped for a more definitive diagnosis. Dr. Adney noted that the X-ray I had brought with me showed Arjan's stomach was positioned up against his diaphragm, indicating his liver was shrunk, suggestive of cirrhosis of the liver. So I knew it was basically hopeless and for a little while we considered having him put to sleep in Dr. Adney's parking lot, just like Cinnabar. However, human nature is to hope and pray. And Arjan was not Cinnabar. His quality of life was exceptionally high. If there was some way to reverse the liver damage and return him to metabolic equilibrium, we had to try. We chose to give Arjan his chance to recover. I would recognize when it was time to end his life, but it was not now, it was not here. He was an intensive care patient. This is very emotionally consuming and other cats were neglected as I poured all my energy into him.

We took Arjan's condition one day at a time. When considering euthanasia, one has to be certain that you are not putting out a spark of life that is capable of returning to full flame. And no matter how remote the possibility, it weighs heavy on your mind. But if you are told the situation is grave and any chance of recovery will be a long, slow process and you gamble for recovery, every day you put your beloved through their suffering may be for naught. On Saturday, as I desperately surfed the Internet for answers and wondered about the connection between him and his brother Cinnabar I wanted to speak with veterinarian's more experienced. I called Peregrine Wolff, DVM in California. She and her partner Scott Ansel, who write the veterinarian column for the FCF newsletter are also the veterinarians contracted by the USDA for their Big Cat Symposiums. They have extensive experience from San



Arjan during his limber youth



Diego Zoo and Moorepark College. I relayed everything about Cinnabar and Arjan and asked her opinion on the most recent straw I was desperately grasping at. . . maybe these brothers were suffering from liver flukes and if I could just kill the flukes, his liver would recover. Dr. Wolff thought not, and told me that she has never regretted putting down a 15-year-old feline. "They always have lots of pathology", she said. She told me, "all I was doing was rearranging the chairs on the deck of the Titanic." And I finally accepted his fate and she relieved my mind of any lingering doubt that I might be ending his life prematurely when all he needed was more time to heal. I knew it would be a weekday before I could make arrangements with a veterinarian. I spent a lot of time with him and cried many tears and poured all my love out to him.

Tuesday was predicted to reach 70 degrees and we planned to let him soak up the warmth of the sun's rays one final time before we put him to sleep. I went through the motions of offering him food that morning just as I did every day, and to my utter amazement, he started licking the chicken neck and then managed to consume it. I hand fed him three chicken necks that morning. We changed our plans and once again put our hope into thinking perhaps he was going to beat this. That afternoon, I managed to hand feed him about 5 very tiny slices of beef, less than what I could cup in my hand. And so later on that day, I injected more B complex and more antibiotics in Arjan. I drove to town to buy more electrolytes for his water. I boiled him some chicken neck soup. At dinnertime he licked from my hand about 5 cooked chicken neck skins and swallowed them and then licked at the cooked necks with his raspy tongue and abraded some of the meat off and swallowed it.

I spent most of his last evening by his side, stroking him and observing him. We had a lot of quality time together. And he was barely out of my sight that day. He had around the clock attention and I am sure he knew how much he was loved. He was very peaceful that last night; too much so, as if living and eating the little bit he did, exhausted him. I went to bed hopeful. I slept better than I have this past week, however I awoke with dread and checked on Arjan early. His eyes were still clear and direct, but he was more prone than other days. I thought about administering more lactated ringers solution. Going through the denial process one more time I told myself this was something I could reverse, that he was just run down from dehydration. And then I thought about how he hated to be stuck with needles and it would ruin the mood of the day. No, all I needed to do was love him.

I drove him over into his exercise yard, hoping the movement of the truck would bring him to his feet, but it did not. I parked the truck facing his brother Sharu in the main cage. I let him soak up the beauty of his world and feel at peace. And then it happened again – as I palpated his abdomen I could feel a hard lump and I wondered if it were fecal material . . . wondered if his problem was just an intestinal block. I went through one final period of denial and for a couple of minutes I considered driving him 70 miles to Dr Adney for that barium X ray - for him to find a block somewhere and just perform surgery and make this all stop happening. And then I came to my senses – it was too late, Arjan could not survive surgery even if he needed it. And a block does not cause this fluid build up in his abdomen. And the first x-ray has already shown his liver is all shrunk up. And he is not going to recover.

It was time to put him to sleep and end his suffering. He had tried so hard for me, and when he rallied the day before to try to eat, he gave me hope. But it was not fair to continue to ask this of Arjan. He led a full life, he gave everything he had to us, and I have no regrets. The next day we performed a necropsy on Arjan. The lump I had felt was indeed a hard cancerous mass. His intestines were invaded by many smaller growths as well. His histopathology report stated the large tumor on his liver was bile duct carcinoma. It amazes me that he ate up to 11 days before his death.

Mother Earth, Father Sky,  
this is our beloved son Arjan.  
The cycle of his life is complete.  
What came from the earth,  
returns to the earth.  
What came from the spirit,  
returns to the spirit.  
Mother Earth, embrace your perfect child.  
Father Sky, hear me.  
This is Arjan, a prince among cats.  
A warrior who loves peace.  
He is beauty, intelligence, strength, agility,  
courage, mischief, passion, devotion.  
If we are immortal then he is immortal,  
because our love for him will never die.  
Farewell Arjan.  
Find the trail to your brother.  
I can see your face in the clouds.  
I can hear your voice in the wind.  
I can follow your trail.  
I will find you.  
We will all be together again.  
Bart Culver

It is rare in life when one finds their true passion and enjoys the freedom to pursue it. Cinnabar, Arjan and Sharu complete me. Today is Thanksgiving. And I am so thankful for the honor of being their guardians. I owe them a debt that can never be paid. I have loved them and served them for 16 years and they have never betrayed me. By the time you read this story it will be the Christmas holidays and I hope that my sharing these painful losses won't dampen your joyous spirit. Remember how blessed you are and pay special attention to the felines in your care. I hope that you can draw from my shared experiences and someday use these stories to help you make your decisions when you are faced with terminal illnesses.



Arjan and Lynn

## Playa de Oro Reserve in Ecuador



Our most recent trip in November to the Playa de Oro Reserve in Ecuador proved to be very exciting. Right before I left for this trip, I was notified by the Cincinnati Zoo that they were awarding FCF with a conservation grant to support our camera trapping research at the reserve. Cincinnati Zoo awarded us with \$1950 to purchase 3 brand new digital camera traps for use at the reserve. I did not want to waste any time getting these new cameras operational at the reserve, so I had the cameras overnighted, and barely had time to take them out of the shipping boxes and packed into my suitcases before I left. The camera company gave me a crash course on how to operate the new cameras over the phone, as well as advised me on some new techniques for the old cameras to help them function better. It is so incredible that a zoo is willing to back our project and really lends FCF some credibility for our research efforts. A very special thanks to the Cincinnati Zoo employee, Laura Carpenter, for applying for and getting this grant for the reserve and FCF. We will now be submitting regular reports to the Cincinnati Zoo on the

progress of the camera trapping, and Laura Carpenter will be doing presentations and annual reports to the Zoo's Conservation Committees.

FCF used member donation funds to purchase needed supplies for the new cameras such as extra memory cards, extra batteries, etc. The funds raised from our art print raffle this summer came in handy to supplement the camera expenses. What is nice about the digital cameras, is that we will not have to buy film, develop film, and buy supplies of batteries for the new cameras. The batteries that the cameras use are lead acid gel rechargeable system batteries, which can be charged off the reserve's solar panel. So even though the cameras and supplies are expensive to start off with, there will be virtually no further expenses to keep these cameras in operation. Now the reserve will simply mail the memory cards back and forth to me, and I will download the pics for distribution.

I arrived early in Ecuador before our FCF group to meet up with Rosa Jordan, (who initiated the start of the Playa de Oro reserve and oversees the reserve's operations), to go on a little side trip to the other side of the country. We planned to visit a primate reserve she helped set up last year, and two other ladies who are supporters of the primate reserve joined us for this side trip. We went to a large local market and worked with the police to confiscate animals that were for sale illegally. Basically, the way this worked, is that the police would not just arrest someone or confiscate an animal because it was in their booth. Rather, the police wanted to catch the person in the act of selling the animal. So our job was to go around and negotiate to buy an animal while the police tried to hide and watch from nearby. When the police saw money exchange hands, they approached and confiscated the animal and handed out tickets. I am not sure what the punishment was, or if there was any to the sellers, other than losing their merchandise. After the police confiscated the animals, they would hand over the confiscated animals to one of us in our party that waited elsewhere. The point of doing this was that there were some very sick animals in this market that needed help, some were endangered species, and it was illegal for these animals to even be for sale. We could have just outright bought the animals, but the act of just flat buying the animals only encourages the sellers to keep supplying animals to sell in the market. But if the animals are taken away by the police, and no money is made off them, then this might discourage the seller to stop obtaining animals to sell in the future. The police do not actively confiscate animals like this, because in most cases, they have no where or no one to care for the animals if they do. So they were very willing to do this "sting operation", if we were willing to take responsibility for the animal's care and placement. In just a few hours, we had a total of 26 animals, of which 6 of them were endangered species. Since we were headed to a primate reserve the next day, we ended up with quite a few different species of primates. This is also how we came to get a 3 or 4 week old ocelot kitten whom we dubbed "Little Chief". (negotiated price: \$40) The rest of the animals were parrots, turtles, and some small marmosets. We had hoped to find some tamarins for Pico the tamarin, back at Playa de Oro, so he could have a family and proper interaction with other tamarins. We only found pygmy marmosets, so they would have to do for his family unit.

Now the hard part was making all kinds of makeshift cages for all these animals until we could transport them to proper facilities. Some of the animals were very sickly, so we needed to administer health care to many of them right away. We had a cabana of our own with 3 different rooms and a porch of our own, so we were able to spread all the animals out and keep animals separate from ones they had not previously been exposed to at the market. Thank goodness for the traveling vet care pack that FCF member Lisa Padula sent me, we had the basics to help get these animals on their feet until they went to their new homes. Plus she sent kitten formula and bottles so I had enough kitten formula to last the ocelot until we got to Playa de Oro. Over the next few days, we traveled around to various places and placed the animals out. Most of the primates and parrots went to the Cushi Primate Reserve that was about 3 hours upriver, where they will be released once they are healthy. A couple of healthy primates and the turtles went to a private animal garden there in town. And of course, the ocelot kitten was traveling with us to Playa de Oro. One of the pygmy marmosets would also travel with us to Playa de Oro to be a companion to Pico the resident tamarin.

The ocelot Little Chief was so young and fragile. He was not in great shape when we first got him, but within a few days he had improved greatly. The lady he came from stated that his mother had been killed so he was an orphan and she had him for the last 8 days. We really don't know if that is true or not, or what happened to his mother for certain, we'll never know. We estimated that he was somewhere around 3 1/2 weeks to 4 1/2 weeks old when we got him. He is the sweetest little thing, and just loves everyone. He does have that bossy attitude that ocelots have, he could be demanding when it came time to eat or when he needed something. This is how he came to be named Little Chief, because he was sure bossing me around for such a tiny little thing. We hope that Little Chief will become the resident cat ambassador at the Playa de Oro lodge. He will be raised around and in the lodge, and hopefully he will never have to live in a cage. Rather, he will be free to come and go around the lodge as he pleases. We figure that since the reserve is protected, that even though Little Chief will have no fear of humans, he will be safe from being hunted in the reserve. If he is raised at the lodge around people, he will likely establish this area as his territory when he becomes an adult. This way he can have the best of both worlds—he will be able to live almost as normally as a wild ocelot, he will be able to contribute to the wild ocelot gene pool, and will have access to food and care from people at the reserve if he wants it or needs it as an adult.

Our visit to the Cushi Primate Forest and Juri Juri Island was an experience in itself. Wild monkeys raided my cabana 3 different times, where they trashed my room each time, strung out my belongings across the yard, and even stole my digital camera right out of my camera bag! We recovered my camera out of the rafters of the cabana ceiling, thank goodness. Our evenings were spent with Darwin, the director of the primate reserve, telling stories of giant vampire bats that would suck our blood while we slept, and other scary jungle creatures, which left me pretty sleepless. It was only in the morning when I saw Darwin's great big grin and his wife's apologetic nods that I realized he had been telling this gullible city gringo stories just to scare me!

We picked up two additional travelers to go with us to the reserve when we were in Quito, so we now had the maximum number of people that we could take to the reserve. One lady was from Florida, and the other was a young man from Ireland. Those of us on the trip that had experience with kitten care spent the week at Playa de Oro teaching the staff how to care for the ocelot kitten. We decided to go ahead and wean him off the bottle and milk formula, since the staff is not experienced with bottle feeding animals and we did not have enough kitten formula or other milk sources to last for more than a week. They had a manual meat grinder, so I showed them how to grind the meat up into mush, add calcium / phosphorus powder and taurine powder to the meat, put a little kitten formula on it, so that Little Chief would be able to eat it. It took just a few tries, and he was eating it up like a pro. I showed them how to gradually make the meat grinds larger for him as he grows, until he is big enough to eat bigger pieces of meat and bone. The calcium and taurine vitamins were donated to FCF by Pet Ag at our convention this summer, so I was glad that we had it on hand, because this little guy definitely needed it on his new diet! By the time we left the reserve he would have been close to 6 weeks old, so he was not weaned to meat too terribly early. I would have preferred not to wean him so early, but under the circumstances, we just did not have the supplies or experienced staff to keep him on milk formula much longer. He was very active and spunky by the time we left, so we felt he was off to a good start in the staff's hands.

Another project we worked on was the camera traps. I returned the 3 cameras we had to make repairs on earlier this year. The camera company suggested that we stick new tampons down inside the camera case housing to absorb the humidity inside the casing that was breaking down the film emulsifier. They said several researchers in the Belize area came up with this idea, and it had been working very well. I had hoped that Mauro, the reserve director, would not know what tampons were so it would spare me the embarrassing explanation. Alas, he did know what they were, and after he got over his fits of laughter, it took quite a bit of coaxing to get him to even touch a tampon to stick it down into the camera housing. We're hopeful this creative idea will work for our cameras as well as it has for the researchers in Belize.

Since we had new digital cameras, I had to spend some time learning how to operate them myself, then train Mauro on how to use

them. The one remaining camera that I left in July was no longer functioning, so I brought it home for repairs. All together we have a total of 7 cameras now for the project, the 4 cameras on loan from Conservation International and the 3 new digitals.

One of the trip members, Carolyn Bakker, donated a satellite phone to the reserve and taught them how to use it, and also has generously offered to pay the phone bill. So we now have telephone service at the reserve! (at the cost of \$5 per minute, but hey, emergencies have no price tag, right?) The phone also has a modem on it, and once the reserve gets set up with a computer, they will be able to email from the reserve, as well as download the photos from the digital camera traps themselves. The \$1000 that FCF donated from our general fund was combined with another \$1000 from Earthways, and \$1000 from Rosa's daughter Jona, to start replacing the lodge's badly deteriorated roof. This was a much needed repair that has just financially been out of their reach until now. There were many more good chicken coops built since our last trip in July. Lots of clothing,



shoes, and other supplies were brought by our trip members, and these items were offered only to those families with the best chicken coops for their cooperation and support of the reserve. Rosa Jordan and FCF member Grace Lush inspected all the chicken coops, and invited those with the best coops to pick items they would like out of all the donated supplies and clothing. This was done to provide positive reinforcement to villagers for their active and direct support of the jungle cat reserve and their efforts to protect the jungle cats.

We also initiated a rescue of 2 ocelots in another town before we left. Mauro came across 2 ocelots being held for their pelts just a few weeks before we arrived at the reserve. He has been working on getting the ocelots away from this person legally, and as soon as he could get funds to transport them he would be able to get them and bring them to the reserve. So trip members Grace Lush, Carolyn Bakker, and myself provided the money to transport these cats back to the reserve. They are young adults who were just captured in traps just 2 months ago, and Mauro feels they are pretty healthy. So we expect that they will be able to be released shortly. Mauro was leaving shortly after we left the reserve to go get the ocelots. He will house them at the reserve until we return in early February. During this time, they will be wormed and monitored for any health problems, and treated accordingly, as well as fattened up. Then when our group returns in early February, if the cats have showed no signs of illness, we will travel to the far boundaries of the reserve, and release these two into the neighboring half a million acre reserve.

We also bought caging supplies with FCF member donation money to build a soft release cage in the jungle. We brought in the caging supplies, and left some money for labor on the cage. We sat down and designed a cage and decided on the location of it, and the reserve staff will begin construction on it after we left, to have it completed by February. This will be a cage for cats that have been in captivity for a long time, to allow them a gradual release back into the wild. They will be able to come and go from their cage as they please, with food provided for as long as they need until they have acclimated to life in the wild and no longer need their diet supplemented. We plan to move Missy into this release cage in February, and start preparing her for release. Just as I returned from the reserve, we were by a researcher wishing to do radio telemetry research on small cats at the reserve. We are hopeful that we can get this organized and funded in time to radio collar Missy, in order to monitor her progress after her release.

The next trip to the reserve is January 30th, so get your deposit in now....lots of exciting things to get to see and do on this next trip...you don't want to miss out on being a part of the pair of ocelots being released and the beginning stages of Missy's release...not to mention getting to meet our new lodge ambassador Little Chief, the ocelot kitten! It may seem that we are only helping the jungle cats a little tiny bit at a time, but a little bit here and there adds up to a lot over time. It looks like after our first year of helping this reserve, we will have rescued 4 ocelots and will have released 3 of them back to the wild. It's only 4 cats, but that's 4 lives saved that would have otherwise been lost to the wild gene pool forever. If we keep going at this rate or possibly increase the amount of rescued/rehabilitated cats each year as we continue support over time, we will have really made a dent in helping these cats in their natural habitat. And that is something really special. It is not just one person's or a few people's work, it is about all of YOU FCF members supporting the project and working together to do whatever we can to support the reserve and save the cats. All of YOU are making it possible through your donations, whether they are donated supplies or financial donations, and all of you that go to the reserve to bring income to the people and to share your knowledge with them, that makes the difference in saving the cats and supporting the reserve. You are the real heroes that the reserve appreciates, depends on, and sends their thanks to, so my hats off to all of you FCF members who have been supporting the reserve in the many ways that you do!

Tracy Wilson, FCF Director of Conservation & Education



**Guide Tracy Wilson demonstrates how difficult life at the jungle reserve can be**

## The Playa de Oro Experience

Before the FCF group of 8 women left Quito for the Playa de Oro Reserve in November, we met a 21 year old college student from Ireland at our hotel. He was very intrigued by the reserve and the FCF group, so we invited him to go with us to the reserve. We had space in our van for one more person and we were leaving the very next morning. He had just arrived in Quito that night, he was traveling alone, and had no plans yet, so he jumped at the opportunity. Below is what he wrote about his experience after a week at the reserve with us crazy FCF gals:

*"Being a cabana boy to 8 amazonian creatures was a perfect introduction to South America....Cat people are great because cats are the most sexy animals in the world. I'd do anything for a sexy lady margay. Enslaved by these bizarre women all week, I have learnt a lot: Canada is a separate country to America, "The Clap" is not a round of applause, and never tremble while you walk if jaguars are about. Thank you so much for crossing paths with me...and giving a wee Irish lad a chance! Best wishes to Little Chief." -Mr: Hillary White of Galway, Ireland*



## Little Chief Ocelot and the Playa de Oro Reserve need our support!

When we first found Little Chief in a Ecuadorian marketplace, he was only around 3 to 4 weeks old. He will need constant around-the-clock care for perhaps the next 6 months. The reserve staff currently only keeps staff at the lodge full time when there are visitors. When there are no visitors to the lodge, one staff member travels to the lodge once a day to feed the current animal residents, Missy the ocelot and Pico the tamarin. Little Chief will require more care than a short visit once a day while he is such a young kitten. Since Little Chief is to be raised at the lodge, and we do not want him taken to the village, a staff member must be paid to stay at the lodge full time to provide the proper care that he needs while he is a youngster. We selected several ladies who will take turns caring for Little Chief at the lodge, and taught them how to care for him and about behavior training so that Little Chief does not become dangerous as an adult. However, the reserve does not have the funds to pay the staff's extra salaries for this project, which amounts to around \$80 per month, not including any extra expenses he will incur such as vitamins, food, or medicines.

Please help support Little Chief's care by donating to FCF's Playa de Oro's donation fund. Every little bit helps in a big way. All of your donations go to directly help the reserve for any animal related projects, such as Little Chief's care or for any other animals that are being rehabilitated at the reserve, caging projects, and conservation research such as the camera traps. We also want to start raising money for radio telemetry research that will hopefully start in the near future. Please do your part to help this important project by sending your donation to:

FCF  
Attn: Harold Epperson, Treasurer  
3310 Remington Drive  
Indianapolis, IN 46227-8126  
Please note that your donation is for the  
Playa de Oro Reserve.

Thanks for your generous support in the  
past year to this project! Keep up the good  
work, FCF members!

**Little Chief  
explores his new  
world at the  
reserve**

## Adventurers Wanted!

Come along with FCF as we explore Ecuador, one of the most biodiverse and culturally rich countries in South America. This tiny country is perhaps the most bio-diverse on earth. Where else can you find such fantastic natural destinations in one country such as Tropical Rainforest, the unique Galapagos Islands, the bird-rich cloud-forest, and alpine paramo with snow-capped volcanoes? It is a country rich in indigenous culture, from the rainforest to the highlands. Journey along with us as we experience breathtaking views of the Andean Mountains, wonder at sleeping volcanoes, browse native craft markets, sample native foods, canoe the swift Rio Santiago, hike through virgin rainforest, dance to the Afro-Latino rhythms in a jungle village, and sleep to the sounds of the jungle. Join us on our adventures to the Playa de Oro Reserva Tigrillos for an adventure of a lifetime! The cost for this 10 day adventure is \$650 excluding airfare. (Fly to Quito, Ecuador) This includes 3 nights at a charming bed & breakfast in Quito (breakfast included), 6 nights and 5 days at the Playa de Oro Reserve Lodge (all meals included), boat transportation, private van transportation, visit to Otavala market, village

tour, village children dance performance, and jungle guide service. Your trip fee supports the Playa de Oro Reserve by bringing income to their village and providing them with work, and also assists with feline conservation projects that are being conducted at the reserve. In exchange, you will see, taste, smell, and hear ancient rainforest as you have never imagined while being safely guided by local men through the jungle, seeing and experiencing their land and its inhabitants as they do.

Space is limited on each tour, so please sign up as soon as possible to reserve your space.

Upcoming Playa de Oro Trip Dates:

January 30, 2003 - February 8, 2004. Deposit due by December 20 to secure your spot on this trip. Total due by Jan 5, 2004.

For more information about this adventure, how to sign up, trip itinerary, or other questions, please email or call Tracy Wilson for everything you need to know. Email at [wildcat@ipa.net](mailto:wildcat@ipa.net) or call 501-230-4072 and leave a message.



## 4<sup>th</sup> Quarter FCF Board of Directors Meeting

The 4<sup>th</sup> Quarter BOD meeting called to order by Lynn Culver opened September 25 and adjourned November 13. The continuation of the voting on the By-law Review Committee Report recommendations was the major focus of BOD business. The following by-laws changes were put before the BOD for voting. The recommended changes were either for amendments to the wording of the current FCF by-law or recommendation for deletion from the FCF by-laws.

BOD voting results for the following by-law review committee report's proposed amendments to existing by-laws were all consistently approved of by 7 yes votes and 1 abstaining vote, and these motions all passed: Article 1 title, 1.2, 1.7, 4.5, 4.6, 4.10, 4.14, 5.2, 5.5, 8.2, 10.1, 11.10, 11.16, 14.2, 14.3, 16.1, 16.2, 16.3, 16.4, 16.5, 16.6,

The following by-laws were also voted upon in the following manner: 1.1 - 1 no, 6 yes, 1 abstain, motion passes; 6.1- 1 no, 6 yes, 1 abstain, motion passes; 7.1 - 6 yes votes, 2 abstain, motion passes;

The following by-law Review Committee recommended changes failed: 1.14 - 7 no, 1 abstain, motion fails; 5.1 - 7 no votes, 1 abstain, motion fails; 5.3 - 7 no votes, 1 abstain, motion fails; motion fails; 6.2 - 7 no votes, 1 abstain motion fails; 7.3 - 2 no, 5 yes, 1 abstain, motion fails

New by-law proposed by Bobby Bean, seconded by Lynn Culver:  
8.4 The Board of Directors may deny membership to persons for cause or that have engaged in previous actions considered to be misconduct or represent behavior that is not consistent with that of the Feline Conservation Federation. 7 – yes, 1 abstain

The following Branch by-laws were all voted to be deleted from the FCF by-laws and moved to Programs and Policies of FCF: 11.2, 11.3, 11.4, 11.5, 11.6, 11.7, 11.8, 11.9, 11.12, 11.13, 11.14, 11.15; 7 yes, 1 abstain, motions all pass

## KHMSF Minutes

by Harold Epperson

On 11-02-03, the Board of Directors of the Ken Hatfield Memorial Scholarship Fund held a special meeting via three-way telephone from Mooresville, IN. The meeting was called to order by JB Anderson with Robert Turner and Harold Epperson participating. A motion was made by Bob Turner to amend By-Law XII DISSOLUTION and seconded by Harold Epperson. The Officers voted to delete the portion which reads: "...exclusively for the purposes of the corporation in such manner, insofar as practicable, to fund or contribute to a scholarship at an accredited school of veterinary medicine or, if such is not practicable, then to such organization or organizations organized and operated exclusively...". The Officers also agreed that, upon dissolution of the KHMSF, the funds shall be transferred to Feline Conservation Federation, a 501(c)3 organization, to be used for the purpose of funding educational, charitable, literary or scientific purposes, which is in accordance with the suggestions made by the FCF members in attendance at the 2003 FCF Membership Meeting during Convention. A motion to adjourn was made by Harold Epperson and seconded by JB Anderson. Motion carried.

## The Speechless Animal

In a twilight of a beautiful day, when fancy seized upon my mind, I passed by the edge of the city and tarried before the wreck of an abandoned house of which only rubble was left.

In the rubble I saw a cat lying upon dirt and ashes. Sores covered his skin, and sickness racked his feeble body. Staring now and then at the setting sun, his sorrowful eyes expressed humiliation, despair, and misery.

I walked slowly toward him wishing that I knew animal speech so that I might console him with my sympathy. But my approach only terrified him, and he tried to rise on his palsied legs. Falling, he turned and look on me in which helpless wrath was mingled with supplications. In that glance was speech more lucid than man's and more moving than a woman's tears. This is what I understood him to say:

"Man, I have suffered through illness caused by your brutality and persecution. I have run from your bruising foot and taken refuge here, for dust and ashes are gentler than man's heart, these ruins less melancholy than the soul of man. Begone, you intruder from the world of misrule and injustice. I am a miserable creature who

By-law review committee recommendations to delete the following by-laws all passed: 11.11, 14.2, 14.3, 16.7; - 7 yes, 1 abstain, motion passes

Motion by Tracy Wilson, seconded by Lynn Culver  
Raise FCF international dues for Canada to \$35 annual. All other International memberships: \$40. Dues increase would go into effect immediately for new members and on the existing member's next membership renewal date. 7 yes, 1 abstain, motion passes

Motion by Lynn Culver, seconded by Bob Turner  
Approve the expenditure of up to \$600 to FAX FCF Position statement on HB 1006 to the entire House of Representatives and the Washington area and Washington based medias. 7 yes, 1 abstain, motion passes

Motion by Bobby Bean, seconded by Bob Turner  
Approve Convention committee recommendation for 2004 Convention date and location of Las Vegas, NV from July 29 - Aug 1. 7 yes, 1 abstain, motion passes

\* In a special lunchtime session, the following FCF By-Law amendments were passed: 1.2, 1.3, 1.4, 1.5, 1.6, 1.8, 1.9, 1.10, 1.11, 1.12, 1.13, 1.15, 1.16, 1.17, 1.18, 1.19, 1.20, 1.21, 2.1, 2.2, 2.3, 2.4, 3.1, 3.3, 4.2, 4.3, 4.4, 4.6, 4.7, 4.8, 4.9, 4.11, 4.12, 4.13, 4.14, 5.2, 5.5, 5.7, 7.2, 7.4, 7.6, 7.7, 7.8, 8.1, 8.2, 8.3, 8.5, Article 9, 10.2, 11.1, 12.1, 13.1, 13.2, 13.4, Article 15, 17.1, 17.2, 17.3, 17.4, 17.5, 17.6. The FCF Board of Directors will remain in session pending completion of the By-Law amendment review process. The entire FCF by-laws will be printed in an updated version of the membership handbook which will be distributed with the December issue of the FCF newsletter.

served the son of Adam with faith and loyalty. I was man's faithful companion.

I guarded him day and night. I grieved during his absence and welcomed him with joy upon his return. I was contented with the crumbs that fell from his board, and happy with the bones that his teeth had stripped. But when I grew old and ill, he drove me from his home and left me to merciless boys of alleys.

Oh son of Adam, I see the similarity between me and your fellow men when age disables them. There are soldiers who fought for their country when they were in the prime of their life has come and they are useful no longer, they are cast aside.

I also see a resemblance between my lot and that of a woman who, during the days of her lovely maidenhood enlivened the heart of a young man; and who then, as a mother, devoted her life to her

children. But now, grown old, she is ignored and avoided. How oppressive you are, son of Adam, and how cruel!"

Thus spoke the speechless animal whom my heart had understood.



## Pacific Northwest Exotics

*"Working to Promote and Protect Responsible  
Exotic Animal Ownership"*

### PNWE AUGUST MEETING MINUTES

Submitted by Jen Anderson, Secretary-Treasurer/Editor

The August meeting was held at Prindle Park in Washougal, Washington for our annual club picnic. The weather was beautiful and we had a lot of members participate. Thanks to all who came and help set-up and a special thanks to Sharon Ensley for reserving the park and making the arrangements! We appreciate your hard work!

Although there was not a lot of club news to go over, there were some items Steve brought up at the meeting.

First, and foremost, our Vice-President, EZ Jewell resigned her position. Because we are only months away from nominating new club officers, Sharon Ensley volunteered to become the new "fill-in" as Vice-President. Thanks Sharon, for coming to the rescue!

Second agenda was discussion of the Unique Animal Expo to be held at the Washington County fairgrounds in Hillsboro Saturday and Sunday October 18<sup>th</sup> and 19<sup>th</sup>. There was discussion of what members were bringing and when we would meet to set-up the Friday evening before.

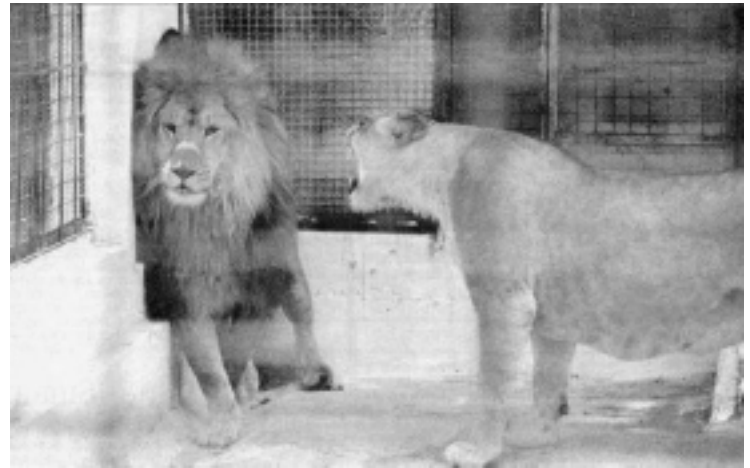
Steve Belknap has reserved a booth that is located next to the PNWE booth for his own selling of merchandise and animals. As we CANNOT sell personally within the club booth, Steve has generously offered that any member, who wants to sell animals, can do so in his booth. Steve has requested that anyone selling anything through his booth, help pay for his costs of renting the booth, by giving Steve 10% of the sale. Thanks Steve for offering!!

The next meeting will be held on Sunday October 26<sup>th</sup> at the home of Matt and Jen Anderson in Vancouver.

The meeting was adjourned to food, friends and chit-chat!



Envy Cougar having a ball at Wildworks



Proof Marriage Exists in the Animal Kingdom

### Bubbly Threat to Spain's Rare Lynxes

LONDON, Dec 27 (Reuters) - Cracking open the New Year bubbly could contribute to the first feline extinction since the prehistoric Sabre-tooth tiger, wildlife campaigners said on Friday.

Lynxes in Spain and Portugal are becoming critically endangered as their cork-forest habitat dwindles.

With demand waning for traditional corks in favour of synthetic stoppers in wine and champagne, farmers are felling the cork forests to make way for more profitable crops and the pointy-eared Iberian lynx could become one of the casualties.

"Clever propaganda by the manufacturers of screw tops and plastic corks has led many people to think that cork stoppers are bad for the environment when exactly the opposite is true," Beatrix Richards of the London-based Worldwide Fund For Nature (WWF) said in a statement.

"Something radical must happen to save the lynx or it will be gone within the decade, making it the first feline species extinction since the sabre-tooth tiger," said Eduardo Goncalves, author of "The Algarve Tiger," a book about the Iberian lynx.

The nocturnal cat has a yellow coat dotted with deep brown spots and can grow to the size of a house dog, some 13 kg (28 lb).

Until recently, it was believed that some 1,000 Iberian lynxes — distant cousins of the American bobcat — prowled the grasslands of southern and central Spain and Portugal. But in the past year has that figure been revised down to below 200.

The WWF says only 30 breeding females are left and rare species of deer and eagle could also suffer from the destruction of the cork forests, which have long been a commercial mainstay of the region, producing 15 billion corks per year.



FCF member Fred Boyajian and Samantha caracal.

-Photo by Nancy Barter





# Wrapping Presents With A Cat

1. Clear large space on table for wrapping present.
2. Go to wardrobe and collect bag in which present is contained, and close door.
3. Open door and remove cat from wardrobe.
4. Go to cupboard and retrieve rolls of wrapping paper.
5. Go back and remove cat from cupboard.
6. Go to drawer and collect transparent sticky tape, ribbons, scissors, labels, etc.
7. Lay out present and wrapping materials on table, to enable wrapping strategy to be formed.
8. Go back to drawer to get string, remove cat that has been in the drawer since last visit, and collect string.
9. Remove present from bag.
10. Remove cat from bag.
11. Open box to check present, remove cat from box, replace present.
12. Lay out paper to enable cutting to size.
13. Cut the paper to size, trying to keep the cutting line straight.
14. Throw away first sheet because cat tried to chase the scissors and tore paper.
15. Cut second sheet of paper to size by putting cat in the bag the present came out of.
16. Place present on cut-to-size paper.
17. Lift up edges of paper to seal in present, wonder why edges now don't reach, and find cat between present and paper. Remove cat and retry.
18. Place object on paper, to hold in place, while cutting transparent sticky tape.
19. Spend next 20 minutes carefully trying to remove transparent sticky tape from cat with pair of nail scissors.
20. Seal paper down with transparent sticky tape, making corners as neat as possible.
21. Look for roll of ribbon; chase cat down hall and retrieve ribbon.
22. Try to wrap present with ribbon in a two-directional turn.
23. Re-roll up ribbon and remove paper that is now torn, due to cat's enthusiasm in chasing ribbon end.
24. Repeat steps 12-22 until down to last sheet of paper.
25. Decide to skip steps 12-16 in order to save time and reduce risk of losing last sheet of paper. Retrieve old cardboard box that you know is right size for sheet of paper.
26. Put present in box, and tie down with string.
27. Remove string, open box and remove cat.
28. Put all packing materials in bag with present and head for lockable room.
29. Once inside room, lock door and start to re-lay out packing materials.
30. Remove cat from box, unlock door, put cat outside door, close door and re-lock.
31. Lay out last sheet of paper. (Admittedly this is difficult in the small area of the toilet, but try your best!)
32. Seal box, wrap with paper and start repairs by very carefully sealing down tears with transparent sticky tape. Now tie up with ribbon and decorate with bows to hide worst affected areas.
33. Label, then sit back and admire your handiwork, congratulating yourself on making good of a bad job.
34. Unlock door, and go to kitchen to make drink and to feed cat.
35. Spend next 15 minutes looking for cat, before coming to obvious conclusion.
36. Unwrap present, untie box and remove cat.
37. Retrieve all discarded sheets of wrapping paper, feed cat and retire to lockable room for last attempt, making certain you are alone and the door is locked.
38. At time of handing over present, smile sweetly at receiver's face, as they try and hide their contempt at being handed such a badly wrapped present.
39. Swear to yourself that next year, you will get the store to wrap the darn thing for you.



Kim Schilling's lynx Sasha checks out the odd changes in her world caused by the snowfall.



## All Boxed Up To Go

Maddie, still currently living with Kyle Hinze

Will the Tiger smiles for Santa at the Conservators' Center in NC

