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Feline Conservation Federation



Feline Conservation Federation Officers and Directors Contact Information

Founder: Catherine Cisin

Copy Editor/Layout:

Mike Friese
204 S. Batavia Street
Orange, CA 92868
714-532-4041
e-mail: mike@friese.com

OFFICERS:

President:

Bob Turner
4467 E. Dayhuff Rd.
Mooresville, IN 46158
317-831-0817
e-mail: robert.l.turner@gm.com

Vice President:

Kevin Chambers
7816 N CR 75 W
Shelburn, IN 47879
812-397-2302
e-mail: ZooARC@worldnet.att.net

Secretary/Treasurer:

Harold Epperson
3310 Remington Drive
Indianapolis, IN 46227
317-889-3922
e-mail: hpepperson@aol.com

DIRECTORS:

Conservation/Education:

Carol Bohning
P.O. Box 711
Johnstown, OH 43031
740-966-6059
e-mail: Lynxrufus@voyager.net

Advertising and Publicity:

Marcus Cook
25 Highland Park Village, Suite 100
Dallas, TX 75205
866-755-9735 (toll free)
e-mail: marcus@zoopros.com

Membership Services:

Carolyn Clendinen
10605 Coquita Lane
Tampa, FL 33618
813-933-3405
clendinens@hotmail.com

Legal Director:

Evelyn Shaw
13262 Cleveland Road SW
Pataskala, OH 43062
740-964-9040
e-mail: ecvshaw@yahoo.com

LIFE DIRECTORS:

J.B. Anderson

1825 E. Nashville Church Rd.
Ashland, MO 65010
573-657-4088

Robert Bean

P. O. Box 26201
Knoxville, TN 37912
865-938-0702
wildcon2b@aol.com

Lynn Culver

141 Polk 664
Mena, AR 71953
479-394-5235
e-mail: culvers@voltage.net

FCF Feline Facility Accreditation

Chairman:

Kevin Chambers
7816 N CR 75 W
Shelburn, IN 47879
812-397-2302
e-mail: ZooARC@worldnet.att.net

BRANCHES:

MEFES: Midwest Exotic Feline Educational Society

Pam Hotle
5821 W Mooresville Road
Indianapolis, IN 46221
317-856-1115
e-mail: PHotle1@comcast.net

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**On the cover: Lynx know how to keep
secrets! Kippy whispers into Blitz's ear.
Photo by Mace Loftus.**



Mace Loftus

Blitz keeps an eye on Kippy



Feline Conservation Federation

This magazine is published bi-monthly by the LIOC Endangered Species Conservation Federation, Inc. d/b/a as the Feline Conservation Federation. We are a non-profit (Federal ID# 59-2048618) non-commercial organization with international membership, devoted to the welfare of exotic felines. The purpose of this publication is to present information about exotic feline conservation, management, and ownership to our members. The material printed 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'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 magazine may not be made without the written permission of the original copyright owners and/or copyright owner FCF. We encourage all members to contribute articles. 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. Submission deadline for the next issue is the tenth of odd numbered months. Please submit all photos and articles to the editor. Persons interested in joining FCF should contact the term director in charge of member services.

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Letter from the President

Thanks follows gratitude

It is a new year and I hope it will be a good year for you, your family, animals, and our servicemen and servicewomen serving overseas fighting the terrorists who want to destroy our freedom or what freedom we have left.

This is a personal thing for me, but I do not understand how some American citizens are against our servicemen and servicewomen who are putting their lives on the line to protect our freedom. I'm so relieved that Captain Keith Wilson, husband to FCF director Tracy Wilson, just recently made it safely back from Iraq.

Now we have to do our part here in our own country fighting the AR terrorists who are using the media and the legislators to destroy one of our basic rights to be able to share our lives with the animals of our choosing. We have many state ban laws ready for passage again early this year.

All of you that live in a state that has or will have state and local ban bills must fight as hard as our military personnel are doing to give us the very right to fight these ban bills. It is the people within that state that can do the most good of fighting the ban bills within their own state. Out-of-state people can give support, but the most good comes from the voters within that state. So, get out there and fight when these ban bills are presented.

I'm so thankful for the leadership of the FCF branch "Midwest Exotic Feline Educational Society" (MEFES). President Pam Hotle along with the rest of the MEFES officers are doing an excellent job on continuing to make MEFES successful. Back in the 70's there were 18 branches and now FCF is down to just this one branch. The cause is mainly due to the Endangered Species Act and the distraction of today's busy lifestyle. I have hope that "Alliance for the Conservation of Exotic Felines" will rejoin FCF and that somebody will resurrect "Pacific Northwest Exotics".

I am very proud of the past and present FCF board members that gave so very much of themselves for FCF in 2005. It is hard for a FCF member who has not served on the board to realize how much work the officers and directors devote to FCF. I'm especially very proud of FCF members who are not on the FCF board that gave so very much toward FCF last year. Three that stand out are Irene Satterfield from Kansas, Mike Friese from sunny California, and Sara Comstock from Pennsylvania.

Irene Satterfield for an outstanding job she has done on the new FCF web site. Irene has spent hundreds of hours setting up the web site for FCF. Irene is so intelligent to be able to do what she does on computers. If you have not accessed or logged onto the new web yet, then you need to log on and see what a wonderful web site FCF has.

Mike Friese for doing the excellent job on the newsletter. Even though Lynn Culver is on the FCF board, we cannot leave her out as she helps Mike gather articles and gets the newsletter mailed out. Mike had not even heard of FCF until two days before the 2005 FCF National Convention held in Miami. In just two days, Mike was able to fly from California to Miami and attend the convention. Within five minutes of meeting Mike at the convention, it was like he had been a member for years. Boy, did he fit in! Within a few weeks after the convention and with the help of Lynn, he became the FCF editor.

Last but not least, Sara Comstock, for an outstanding job of keeping us abreast on the FCF chat list of all the state and local proposed ban laws. It takes lots of time to get all that information out to FCF. Thank you Irene, Mike, and Sara for your outstanding work.

Thanks to all the FCF members who gave monetary support to all the felid field research and conservation projects last year.

Don't forget to support the FCF magazine advertisers by buying from them any



Phil Parker

animal related items that you need. They all have excellent products and let's patronize them first. Their ads help defray the cost of our expanded publication of the newsletter.

Finally, I like what Pat Hocter, owner/editor of the "Animal Finders Guide" stated: "We are in control of our own destiny. Our lives can be as happy as we allow them to be. Love and caring are things we can give away and never run out of. In fact, the more we give them away, the more we get them back."

Have a very happy new year with your family, friends, and your animals.

In your service,

Bob Turner



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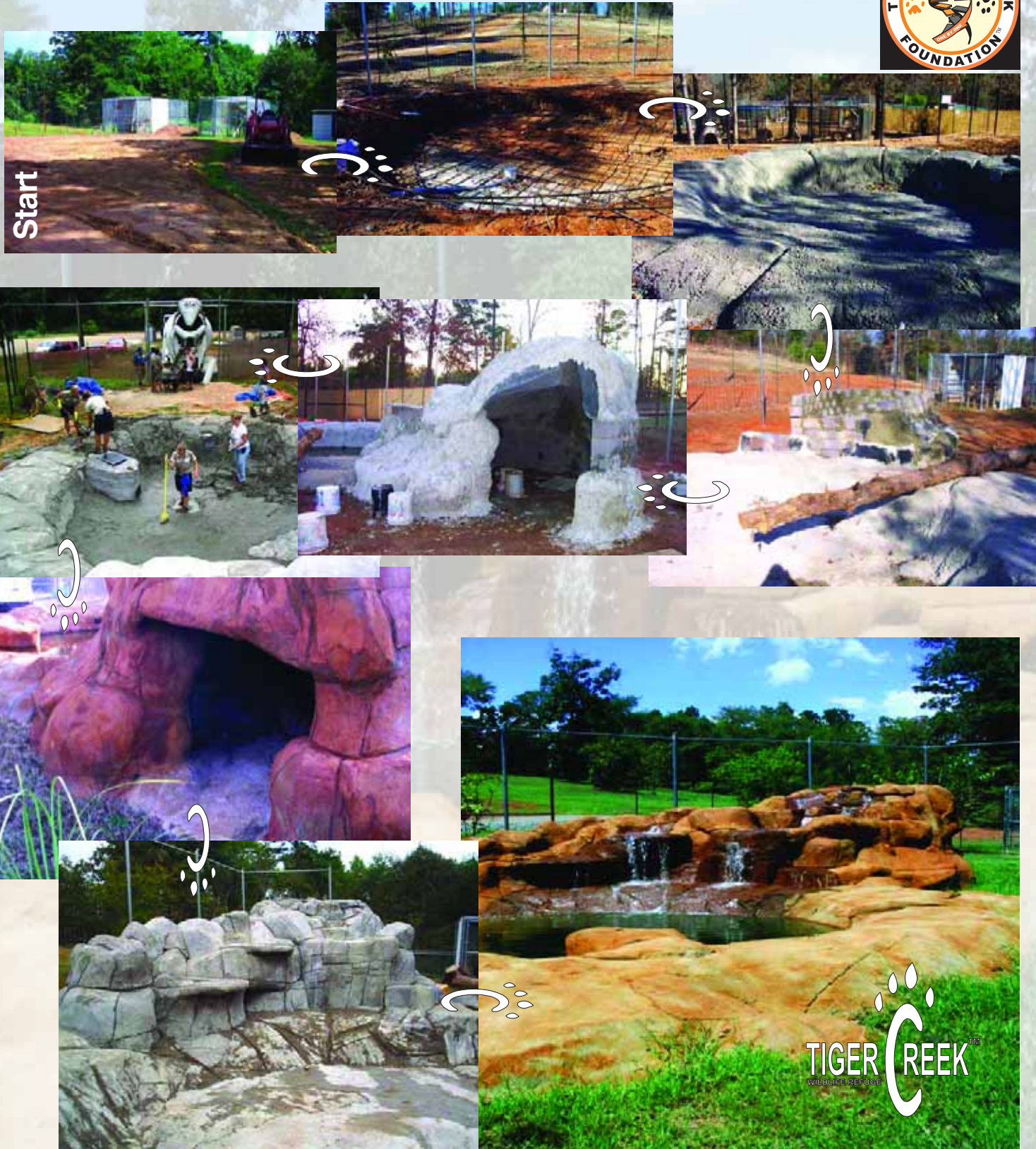
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Waterfall Habitat Odyssey, Step-By-Step

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Meet the copy editor

I'll admit it. I'm a cat person.

When I was a kid I didn't realize it. When our water heater burst, we discovered two kittens below it. One was killed. The other became my companion. Only as an adult could I look back and realize I had a much closer bond with Cha-Cha than the average person has with their cat. We spoke a vocabulary in which we really could communicate. I would take her on walks around the block on my shoulders. Every night she slept in the chair next to my bed.

When I was in grade school, I encountered my first exotic pet. I was riding my bike down an alley and I noticed a cat on a leash. That seemed odd enough, but this cat was big and had quite a test pattern on her. The man told me she was a margay and he let me pet her.

My teens were catless but when I moved out on my own, a black kitten showed up on my doorstep. I didn't think I wanted a cat but I kept Kinsey until she passed away at 18 years old. I didn't have a "normal"

relationship with Kinsey either. Skittish and aloof, with positive reinforcement, I trained her to roll over. This embarrassed some of my dog-loving friends.

In 1990, I discovered cats make good camping companions. Now I go camping almost every month in the winter and I have found one of life's true pleasures is sitting around a campfire with a cat curled up on your lap. My camping friends call me the catman.

20 years ago, a book awakened my intense interest in exotic ownership. In the late 1990's, I bought the book, *Cheetah*, by Karl and Katherine Ammann and the fantasy of having a cheetah as a housepet was kindled in my mind. So I started looking around for people who kept cheetahs. I never did run across Tippi and Pharaoh. At that time I did not realize how rare cheetahs were as housepets, even



though in some countries they are legendary in that role.

Fast forward to today. That's how I found FCF. I was trolling the internet considering non-cheetah exotics, when I found a community of like-minded individuals about to have their annual meeting in two days. So, you can see why I rushed to the convention to meet lots of people who live my fantasy. And unlike cat-show people, you let me pet the cats!

The only bad thing about the convention: it was the beginning of my realization that I had missed the exotic-owning era in California. When I was a child, a friend had a skunk. He

would bring it over to my house for visits. I would have never discovered what polite and cat-like creatures skunks are by merely looking at them through bars in a zoo. I also missed the era when the Opossum Society was giving away free opossums to whoever would give them a loving home. Members of the society boasted to me that opossums made great pets. Today the very same Opossum Society is anti-ownership and they say opossums make terrible pets. Did the opossums change?

Today California law prohibits most pets, exotic and mundane. You can't legally keep even a gerbil as a pet in California. So, it goes without saying that all exotic cats are forbidden. Oddly, no exotic-domestic feline hybrids are prohibited, so maybe I'll have set my sights in a different direction.

In the meantime, I will continue to cherish the stories of your cats from afar. I appreciate the opportunity to put together the FCF magazine and I hope in a little way the magazine can help to slow the ban laws which are enveloping this hobby.

—Mike Friese, Orange, CA

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Playa de Oro School and Music Program

Educating the community's children while supporting the protection of the habitat and native wildlife

Individual FCF members have been helping support efforts to educate the children of the Playa de Oro village over the past year in exchange for the community protecting their forests and the wildlife within, especially the native wildcats. When I visited in September, I had the opportunity to meet the school teacher that your donations have provided for the last year. She has really organized the school well and we were all quite impressed with her professionalism. The Playa de Oro school has improved by leaps and bounds under her direction. However, there continues to be a need to keep the teacher's salary paid (which is just \$100 a month), provide government-required school uniforms for the children, and the always-needed school supplies.

We are also interested in starting a music program for the school, in which an instrument maker and musician will teach the children how to make musical instruments and how to play them. This will teach them useful skills they can make a living from later in life. The school teacher has located a qualified individual who is willing to teach the children these skills by staying full time at the village for four months, for the cost of just \$150 a month. That's just \$600 for an entire music program that will teach invaluable skills to many!

It is amazing how far our money can go to improve the Playa de Oro community. Just think, for just a \$100 a month for the teacher's salary, an education is provided to about 90 school children every month. For just \$600, an entire music program will be provided to the entire village to teach valuable skills that will last a lifetime.

The school teacher gave me a wish list of things they need for the children or the



classroom. This will give you an idea of the supplies needed by the Playa de Oro school. You'll notice most of these items are basic items that we would assume that any school should have. But remember, they do not have any funding at all outside of donations for the school. This is why the school needs our support!

We are not collecting items at this time as we have done in the past, but instead we are collecting monetary donations for the school teacher to purchase the items in Ecuador. (See wish list at right.) All the donations will go through the Playa de Oro Reserve as a benefit to the community supporting the reserve and protection of native wildcats and will be overseen by the reserve manager. We always stress that any benefit that we provide to the Playa de Oro village is because of their support of the habitat and wildlife there. Those of us that have visited Playa de Oro have seen with our own eyes the difficulties and challenges this community faces from the outside pressures to log or mine their land for large sums of money. We have come to respect the community of Playa de Oro for not succumbing to greed or pressures of the modern world to log their forests for money or other material things. That is why we try to help bring benefits to the community to encourage

them that they do not need to turn to those other forces that will destroy their forests, just to fulfill their basic community needs. Please help us support the school and music program by donating any small amount of money you can spare which, in turn, ultimately supports habitat and wildlife protection.

Please send your tax deductible donation to FCF, marked for Playa de Oro school and music program to:

*FCF Treasurer
3310 Remington Dr
Indianapolis, IN 46227*

If you have the ability to provide any items on the school wish list in large quantity, please contact me to arrange transporting the items to the village. Feel free to contact me if you have any ideas to help or questions about the school or music program for Playa de Oro. As always, we thank you very much for your ongoing and enthusiastic support in this important rain-forest habitat project!

*Grace Lush,
Community Benefit Coordinator,
Playa de Oro Reserva de Tigrillos
Email: grace@bundascattery.com*





Lynn Culver

Playa de Oro School Supply Wish List

- Large classroom size chalkboards (4)
- Wooden desks and chairs (built in Playa de Oro)
- Paint for school building
- World globes
- Encyclopedias and dictionaries (in Spanish)
- Book cabinets (built in Playa de Oro)
- Ecuador country flags (large to hang on wall in classrooms)
- Tablets of thick white paper, no lines
- White copy paper
- Atlas (several)
- Abacus for students (many)
- Spanish/English flash cards
- School uniforms: dark blue pants, white shirts \$15 per student (required by federal government)
- Cotton fabric for marimba uniforms white for 6 boys pants, bright colors for 6 girls (3 meters per skirt)
- Soccer balls
- Lego toys/building type toys
- Puzzles

EXOTIC CAT WORD SEARCH

By Shelleen Mathews

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S C O E J D T I Q W R E C S D Z I S G X M A Q G H
G U C Y I B O B Z A E H K O C H T A K W O C R A S
A T Z A D O N F U S I C A R D Z B N S L R A H R J
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O F U S T A C N E D L O G T E B Q V I C U C L O N
D E G X C S U B Y S I Q O F O C A M T I G E R I G
S N O W L E O P A R D W C I B J L D Z M O D A C L
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E B U G Y S U Z O M U I S E R V A L A W N M I C D
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Hint: Look vertically, horizontally, diagonally, forwards & backwards. Good luck & have fun!

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Blast from the Past. . . .So Much Sad News

Long Island Ocelot Club

September/October 1984—Volume 28, Issue 5

By *Danny Treanor*

It is with the deepest pain and regret that I inform the members of LIOC that on August 20, 1984, Sundae Margay, daughter of Critter and Tuffy, died at the age of eight years of age. She was robbed of a long life by feline viral leukemia. On September 12, 1984, one-year-old Poco Margay also died of this same malady. The disease had evidently been passed from one to the other.

For many years I believed the exotics were immune to the disease, but my view has been abruptly corrected with a broken heart. I can stand to relive our struggle to save the margays only in hopes that by chronicling the events, it will help others.

Sundae was very special to me, more so because she born at the house and bottle



Jim Sanderson

Wild margay stumbles into camera trap

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raised. As she grew, she resided in a cage next to the dinner table and quickly developed a taste for people food...especially fried or baked chicken, pork chops, ham, and did I mention green beans?

When I relocated to Orlando, Florida, she was the only company I had, the only friend, the only one who understood and was glad to see me at the end of the day.

Her bright eyes and glad look made home very important. She was a finger-sucker and very affectionate. Her purring was every reward I needed.

Three years ago we pulled Sundae through a bout that was diagnosed as leukemia, but I refused to believe it, thinking it was only some weird anemia, solved with a transfusion. It worked, at least for three years.

According to Dr. William Hardy, authority on FeLV at the Sloane-Kettering Institute, the virus is passed by frequent contact through saliva. In our case, the cats were not sharing the same quarters, but did share toys in common.

We took no precautions because we did not think we had a problem. Evidently FeLV can go into remission in a non-contagious form until something triggers the virus to an active form. Since all my difficulties have happened this summer, heat or heat stress might have been a problem.

There are no signs, except one day Sun-

dae acted tired and didn't want to eat. Thinking B-12 would solve the problem, I went to the vet's office where he drew some blood. Three different tests by three different labs all said leukemia. I called everyone in the country doing studies on feline blood problems and all I learned was there was no cure, there were four different viruses, and there may be a vaccine by 1985. Just my luck... a few months away.

The vet wanted to check the other margays but I knew the labs were wrong, so why stress them? Transfusions were the answer until the bone marrow could kick in. The second transfusion from Poco and since we had his blood we ran a test - it came back positive.

I still remember the excitement my wife Ellen and I felt when we found out a male margay was available. It meant a kitten for her and for me a possible mate for Sundae.

The kitten had spent eight weeks with

his mother and had not been handled by people. As I drove home with Poco, he hissed every time the car hit a bump. As I brought him to Ellen, she could hear him hissing as she came through the door. From that point, Ellen spent three days slowly moving her hand closer and closer to where she could touch and scratch him. For days he refused to eat and when he did, he was constipated. The poor baby was off to a rough start with people doing weird things to him.

Poco was raised in the house in order to protect him with special caging. Little feet might stick through the big cage and get nipped. It did not take long before Poco discovered that people could be a great source of entertainment and they did strange and interesting things. He sat on the commode while Ellen took a bath and loved to go for walks.

Poco did everything at 100 MPH with a

lust for life. He couldn't wait to grow up and move to the big cages.

During the illness the cats got weaker and weaker. During the last transfusion for Sundae, we took some blood and it revealed that the vital organs were being damaged - it was only a matter of time. After five hours at the vet's office, Sundae died on the way home. I tried to make it back to the vet's attempting cardiac massage on the way - it was too late.

It hurts to lose a cat - especially when you think of yourself as a "good owner." It's more tragic when know the number of margays left has been reduced by two.

I fully intend to continue with LIOC - some people lose interest when they lose their cat, but I'm still involved and will be for a long time to come.

Danny Treanor

Conservation Update

I am deep in the jungle in the Bakhuis Mountains of Suriname. I am using a very expensive satellite phone to send this update. I am here at a remote site doing a camera-trapping program with a local counterpart. We are 75 km SE of the nearest village. No one comes here and the wildlife seems unaccustomed to people. The Bakhuis Mountains have been explored for bauxite deposits since the 1950s. Now exploration is nearly complete. Ore deposits have been identified and an environmental assessment is being made. Hence the camera trapping program being undertaken for which I was asked to provide assistance.

We daily travel a network of roads on which daily are reported jaguars. All the drivers are trained to appreciate the wildlife. So far we have caught pumas,

ocelots, and jaguarundis in our camera traps. I am telling the mining company BHP Billiton that the area has an abundance of wildlife and that the site could become one of the best-protected sites in Suriname when mining starts—and it will be mined.

I have worked at several mines in Chile that are off limits to the public. Workers are

bused from the hotel where they eat and sleep to the mine site. These sites are the best protected areas in the Andes because no one is permitted to enter who is not authorized. So it could be here. Guards keep out the public and workers stay away from wildlife. The entire mountain range of 2,500 square kilometers will not be mined



Camera trap catches Jaguar and cub

Jim Sanderson

of course and all sites are required by law to be rehabilitated. As conservationists we must work to achieve what we see is possible. I believe this site can be protected and when mining stops, it can become part of the Central Suriname Nature Reserve (CSNR), an area as big as New Jersey where no people live in it or near it. It is just 600km east of here.

By participating in the camera-trapping

program, I can make my voice be heard. It is no longer the wild west here in Suriname and all natural resource companies must act responsibly. It's my position that we must work hard to achieve positive conservation results. To this end we are establishing a wildlife-monitoring program using camera traps and the company agreed to keep it running and asked me to assist in that goal. To stay involved is my goal so my recom-

mendations can be made and will be taken seriously.

This is an incredible area and wildlife shows little fear of people. Of course, I would like to keep the entire area that way forever. To do that, we need to keep the better part of it that way for at most 50 years or as long as mining lasts. Let's get a guarantee now that it becomes part of the CSNR and let's hope that by then some sort of protection can be as good as it was at the mining operation.

In the next issue I will write about Sarawak and also present the list of small cat projects that I am participating in around the world. In this way FCF's conservation funds can be better directed to support real cat conservation around the world.

*Jim Sanderson, PhD
Conservation International
IUCN Cat Specialist Group
Wildlife Conservation Network*



Ocelot appears in camera trap in Suriname



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AMERICAN ZOO AND AQUARIUM ASSOCIATION

2006 Legislative Season—a couple of bright spots

By Lynn Culver

Another year and another round of exotic animal legislation. How do we stay current with all the proposed state laws? The easiest method is to check animal rights web sites—Animal Protection Institute and the Humane Society of the United States have extensive coverage of the bills they have helped write, back, and promote into law. Iowa and South Carolina have copies of the API ban bill before their legislative bodies. WV has introduced a bill to create an animal control board with sweeping powers and dubious intent. The good news is we are seeing a few states abandon the API cookie cutter ban bills supported in the past, in favor of a new approach to exotic animal regulations. Read about these bills being proposed in Missouri, North Carolina, and New York:

Missouri House Bill 1441 regulates inherently dangerous animals. I don't like that description of our cats, maybe we can get that mindset removed. Last year the sponsor backed an API ban but a strong showing by FCF at the public hearing sauced a change in course and this new bill regulates and permits rather than prohibiting. HB1441 requires that all cat owners including owners of hybrids must be USDA licensed, TAOS or ASA sanctuary members or hold a state issued permit. State permit requirements include micro-chipping. Interestingly, exempted entities do not have to microchip. It appears to be an effort to help the state agency deal with tracking escaped pets. However, most of the more

dangerous cats—the large felines—will not be required to have such identification, since they are statistically found mostly in USDA facilities or sanctuaries. The inclusion of domestic hybrids seems over reaching, however the permit fee income generated by broadening the base of required permits will help stabilize the program funding and keep permits fees affordable. This bill bears close watching and strong support by the FCF. The most important consideration is that such permit and registration process not be abused by the agency in charge.

New York Bill AO7862 is actually a bill we can support! Assemblyman Townsend has introduced this bill to undo the animal rights ban bill passed into law last year. This bill is based upon the FCF model for state regulations. It allows for the private possession of wild cats by means of a permit. Individuals who have possessed exotic cats or been employed or volunteered at feline facilities for at least two years and passed a written state test and comply with all other requirements would receive a permit. Caging requirements are included in the bill, and adequate and routine veterinary care is also required. This bill has been referred to the Environmental Conservation Committee. Please contact the bill sponsor Assemblymen Townsend and thank him. And contact the committee chair Thomas P. DiNapoli and committee members and voice your support for passage of this bill to allow responsible private ownership of exotics to be once again legal in the state of New York.

North Carolina Senate SB1032 Senator

John A Garwood is the sponsor of this legislative call for a study. He originally submitted a cookie cutter API ban bill in 2005, but later withdrew it after he received a flood of opposition by NC residents that such a bill will harm the animals, the economy, personal freedom. It is not seen as positive legislation for the state of North Carolina. The good news is that the reworded SB1032 would create a committee to study “inherently dangerous animals” and determine whether there is a need for regulations and what direction the regulations should take. This bill bears close watching and we need to make sure that the intent of such legislation is not altered as it runs through various committees. In developing recommendations, the following entities and groups and appropriate representatives will be included

- (1) *The Department of Agriculture and Consumer Services.*
- (2) *The Division of Public Health of the Department of Health and Human Services.*
- (3) *The North Carolina State University College of Veterinary Medicine.*
- (4) *The State Animal Response Team.*
- (5) *Local law enforcement officials.*
- (6) *Local animal control officials.*
- (7) *Wild animal breeders.*
- (8) *Exotic pet hobbyists.*
- (9) *Commercial pet retailers.*
- (10) *Small zoo owners.*
- (11) *Humane organizations.*
- (12) *Any other entities or groups whose interests may be affected by proposed regulations.*



Shelleen Mathews

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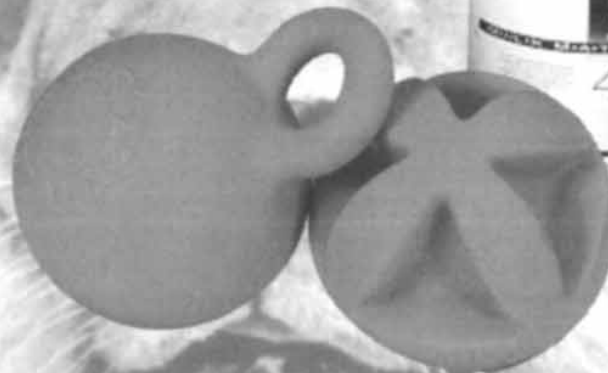
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Iriomote Cat

The Iriomote cat is one of the best-studied cats in the world. There has been an ongoing well-funded Japanese government project to study the cat and to better appreciate its conservation needs. There is presently an estimated population of not more than 100 individuals. In the last 12 years, researchers have radio-collared and tracked more than 130 individuals. This makes the Iriomote cat the best-studied small cat on earth.

The most dangerous threat to the cats is cars. Despite warning signs cats still get hit by cars. Lowland habitat destruction also threatens the small remaining population.

More than 70 road underpasses have been constructed and some are used by the cats to cross the roads. Conservations are reviewing the effectiveness of these underpasses to improve them for use by the cats.

There is an excellent fully instrumented rehabilitation facility where injured Iriomote cats are placed to recover. Many have been placed there and recovered. This allows close observation of their behavior.

The Iriomote cat is well known across Iriomote Island, the western-most Japanese island and closest to Taiwan. The cat is painted on the sides of buses, shrubs in some villages are shaped like crouching Iriomote cats, and there is even an Iriomote Sake. (I have a bottle!)

Interestingly, the Iriomote cat has a



Dr. Nozomi Nakanishi next to a road sign warning calling drivers' attention to a cat crossing.

cousin on Tsushima Island. The Tsushima cat on the Japanese island close to Korea is lesser known but now the subject of a full scientific and conservation investigation.

Recent genetic analysis confirms that the Iriomote cat and the Tsushima cat are subspecies of Leopard cat. Nevertheless, these unique and beautiful island cats—Japan's

only cats—deserve full conservation measures to ensure their continued survival.

*Jim Sanderson, Ph.D.
TEAM Research Scientist
Center for Applied Biodiversity Science
Conservation International
Small Cat Conservation Alliance*



Habitat of the Iriomote Cat.



A stuffed Iriomote cat on display in the wildlife centre on Iriomote Island where the researchers work.

Fauna Focus: Canadian Lynx

Lynx canadensis

The Canadian lynx is one of two North American species of lynx, the other being the bobcat. Canadian lynx are larger than bobcat, weighing 30-45 pounds. They stand about 18 inches at the shoulder. The cheek ruffs and ear tassels are also much larger and they have longer legs, the hind legs being proportionately longer to give them a

So far, this has not been proven by captive breeding, but a blue lynx was born in the USA in the 1980's from a pair of white-footed. Unfortunately, the kitten did not survive. The most noticeable feature of the Canadian lynx is their huge feet. They use these as snowshoes to remain on top of the deep winter snow. This enables them to be

effective hunters of the snowshoe hare, their main prey.

Canadian lynx live in the forests and scrublands of Canada, Alaska, and the extreme far northern US, extending down along the Rocky Mountains. Lynx have also been documented in the tundra and northern Arctic islands. Recent reintroductions into Colorado have not yet had enough time to determine if they will be successful.



Introductions made into New York in the 1980's did not prove to be successful. Since their predominant prey, the snowshoe hare, prefers new growth often found in recently burned or logged areas, lynx may congregate in these areas. Canadian lynx are solitary animals except for mothers with young. The offspring usually disperse at about ten months of age. They are mostly diurnal hunters.

While the Canadian lynx may take small

“down hill” appearance. The luxurious winter coloration is usually gray/silver. In late spring this fur is shed off and replaced by varying degrees of brown or red in the summer. The short 8" tail is tipped with black. There is a natural color mutation known as a “blue” lynx. This color is extremely rare and occurs only in the Yukon and Alaska. Some refer to it as partial albinism, but the color of the coat is a beautiful light grey color resembling a light blue. Another color phase that also occurs in this region is the white-footed. These lynx are normally colored except that they have white on their feet or legs. This varies from just white toes to complete white stockings above the knees. Since this color occurs in the same range as the blue lynx, it has been hypothesized that they are related in some fashion.



Tom Roper



Trading in Exotic Species?

The buying, selling, and trading of protected animals is highly regulated, and is taken seriously by the federal government. Federal laws such as the Endangered Species Act and the Lacey Act regulate who can trade in these animals across state lines—by and large, only few people can. Read up on the Lacey Act, the Endangered Species Act, and other related topics here: <http://www.laceyactawareness.com>. Above all, if you have questions contact the United States Fish and Wildlife Service. Your future may depend on it! Don't be found

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rodents and even the occasional fox, they are dependent upon the snowshoe hare for their survival. No other feline species is as dependent upon a single prey item as is the Canadian lynx. This has been documented by the harvest records from the Hudson's Bay Company dating back into the 1800's. For some unknown reason, snowshoe hare populations run a ten year cycle of population peak and lows. The harvest records show the lynx numbers following the exact same cycle with a 1-2 year lag. While all species have population fluctuations, none exhibit the same predictability or extreme between lows and highs. Canadian lynx numbers in peak periods can be as much as 15 times that of their lows and then can quickly rebound. When the hare population is low, fewer lynx will breed and produce smaller number of kittens with few, if any, surviving. As the hare population increases, more lynx breed with higher number of kittens and more survivability. This relationship between the lynx and the hare is further established since captive Canadian lynx do not exhibit these same fluctuations in litter size or survivability.

The mating season for Canadian lynx is late February through April. The young are born in April, May, or June following a 63-68 day gestation period. The average litter size is 3.5 in years of high population. This average falls to two in the low ebb of the cycle. In captivity, the average litter remains at the 3.5 kittens per litter, with litters up to 8 having been produced and successfully reared. Lynx normally become sexually mature at two years of age for females and three years for males, though younger exceptions have occurred. They can expect a life span of about 15 years.

The Canadian lynx is listed on Appendix II of CITES. In March 2000, the US Fish and Wildlife Service upgraded Canadian lynx from no listing at all, to the status of "threatened" in the contiguous lower 48 states.

This change in status does not affect the international import or export of any captive-born lynx. Further, there is no requirement for any Captive Bred Wildlife or Interstate Commerce permits from F & W when engaging in interstate sales of captive-born lynx. And facilities engaged in the raising of lynx in captivity for the purpose of pelt production are also exempt from any rule changes.

Many states in the USA do list this species on their own state's list of endangered or threatened species. Overall, their population is stable in Canada and Alaska, while they are more rare in the southern part of their range. This takes into consideration the ebb and flow of their natural cycle. In times of the low swing, densities have been found to be 2.5-3 individuals in a 100 square kilometer area. These densities can burgeon to 30-37 cats inhabiting the same area in the good years. In the southern part of their range, where snowshoe hare populations appear not fluctuate, densities remain fairly stable in the 2-3 cats per 100 square kilometer area. Home range sizes are 1.5-9 square miles for females and 1.5-25 square miles for males. Male ranges usually encompass those of females, but same sex overlap has also been found. This reflects a high degree of tolerance of independent offspring by the resident lynx, which is unusual among the cat world.

The Canadian lynx has become very well established in captivity over the last 20 years. Before that, captive births were very rare and notable events. Assinaboine Park Zoo in Winnipeg, Manitoba, was one of the few places that bred Canadians on a regular basis. It is interesting that the practice used by Assinaboine Zoo was that they kept a single male with several females. The male would breed more than one female and when the time came for them to have kittens, the females would always have them in the same nest box even though several were provided. The mothers would care for the kittens communally with each taking their turn caring for the kittens with no apparent preferences for their own.

The firm establishment in captivity came with the interest by fur farmers in an attempt to raise them commercially. In the late 1970's and early 1980's, a single Canadian lynx pelt could bring as much as \$1000. During this time, several fur farms obtained lynx and began working to breed them. Roger Hamel of Quebec was the first to begin to raise them successfully, when he raised nine kittens from 30 pairs that he had. Many others soon followed suit and soon breeding Canadian lynx became commonplace. The bottom soon fell out of the pelt trade and many of these lynx began to find their way into private breeders' hands. The attempt at commercial rearing of Canadian lynx for their pelts failed, but our pre-

sent captive population traces much of its existence to this failed industry.

Canadian lynx are managed by the AZA with a Population Management Plan (PMP), with only 75 cage spaces devoted to this species and since this is a native species, and the holding population falls below the minimum required for a sustainable captive population, zoos are encouraged to develop relationships with state game and fish agencies to obtain confiscations and orphans when possible. Many times more are in the hands of private breeders and the captive future looks bright for this species.

In captivity, adult Canadian lynx are easily kept. Holding true to their far north heritage, they relish cold and snow, seemingly indifferent to even below zero weather. They don't tend to fair as well in southern areas where the summers get very hot and humid and with little real cold weather in the winter. They remain largely inactive, do not grow their luxurious winter coats and generally do not look as impressive as those kept in cold regions. Canadians can be kept behind 14 gauge welded wire and stronger material. They seem to have the calmest demeanor of all wild cats. Even wild caught individuals remain calm and are not prone to wild flight like most other species are. They will eat 1.5-2 pounds of meat a day.

Canadian lynx kittens have a tendency to be susceptible to coccidia infections as kittens and seem to have a more difficult time of overcoming this opportunistic parasitic organism. This is perhaps an indication of this species' compromised immune systems. One possible explanation for such observations lies in the cyclical nature of the wild Canadian lynx population which is completely dependent upon the snowshoe hare, which undergoes population crashes. This species also experiences great numbers of mortalities and little reproduction in certain years, followed by quick rebounds when the prey is plentiful. This would result in greatly reduced gene pools and therefore close breeding, which reduces genetic variation and disease resistance.

Conservation of the Canadian lynx in the wild has a better outlook than that of most felids. In the northern part of their range, habitat destruction is very limited. While hunting and trapping is a pressure put on them, this is strictly regulated and monitored. •

Another Kind of Rescue

By Rosa Jordan

Since the Playa de Oro Reserva de Tigrillos was established in 1996, we have rescued six ocelots and one margay, pictures of which can be seen on our webpage (www.touchthejungle.org). The rescue is always unexpected, and never seems to happen the same way twice. Each one is its own story and on my most recent visit to Ecuador (November 2005), one more rescue story was added to the list.

I had not yet gone to Playa de Oro, but was on the other side of the country in the Ecuadorian Amazon to check on a wildlife rescue project which I have established near the town of Coca. To get from town out to the project, one must drive nine miles along a dirt road, walk through a burro pasture, cross a one-log bridge, hike through a coffee grove, and climb a forested hill to the rescue center.

I checked on the animals in care at the center and was on my way back through the burro pasture when I saw an old man sitting next to a little hut in the middle of the pasture. I knew the man; he doesn't live there but owns the land and keeps a few free-range chickens around the hut. I walked over to say hello to him and almost dropped my teeth. There behind him was a small cage containing a large, frantic-looking female ocelot!

The top of her head was without fur and covered in blood. At first I thought the man must have hit her, then I realized that she had injured herself by incessantly rubbing her head against the wire in her struggle to escape the cage, which was tightly padlocked.

The old man told me that he had trapped her two nights before, after she had stolen six of his free-range chickens from the trees where they roost at night. "Those chickens were worth \$4 each," he told me indignantly.

"She's a nursing mom," I pointed out. "She has a kitten out there in the forest."

"Probably two or three," he told me. "If it was just one, she'd be stealing a chicken only every other day. But she's been taking one every night. She must have been feeding two or three growing kittens."

"If you don't let her go, they'll die!" I cried. "They'll starve to death!"

He agreed that this was true, but didn't seem bothered by it. Instead, he asked if I would like to buy her—and named a rather outrageous price.

"No. But I'll give you \$80 for her," I offered. "Enough to repay you for the chickens you've lost and to buy wire to build yourself a cat-proof chicken pen, so you won't lose any more to ocelots and won't have any reason to trap them."

He shook his head. "For that little bit, I'll

just skin her. If I cut the skin here and here..." He draws a line from his chin down to his groin and along the insides of his arms, "her hide will come off in one nice piece, and will look so good on my wall!"

At that I got up and left, feeling sick. It wasn't that I couldn't pay the higher price he'd asked, but if I did, it would only convince him that trapping ocelots was good business—and he'd go on doing it.

I fretted all the way back to town what to



Above and opposite: Little Chief ocelot when he was living at the Playa de Oro lodge.

do. By the time I got there I knew what I could NOT do: I could not leave that mother ocelot in that cage while her kittens were who-knows-where in the nearby jungle, starving to death. I walked into a hardware store, bought a pair of wire cutters, and drove back out.

It was already sunset. The old man was gone. I walked up to the cage and in two minutes, had a hole cut in the wire big enough to free the cat. She was out in a flash, bounding across the burro pasture, and into the rainforest. Her kittens, if they were still alive, would be fed that night!

I realized that the old man would know that I was the one who had released his cat. I did not know what he would do: come after me with a gun, get together a group of men to harass me, or what. However, I was pretty sure that he would not call the police, because even in Ecuador it is illegal to trap and traffic in exotic animals. I really did not know what to expect—and what happened next was the last thing I would have expected.

When I returned to the wildlife center two days later, our caretaker, who is the old man's son, met me in a state of terrible agitation. He said his father had accused him of conspiring with me to steal and sell the ocelot and was threatening to throw him out, and, and, and... The guy then broke down and began to bawl like a baby. I must say, the last thing I was prepared for was a grown man crying!

I patted him on the shoulder, told him I did it, and I would make that very clear to his father. It simply had not occurred to me that, macho society as Ecuador is, the old man wouldn't think a woman would do such a thing; he would simply assume that some man helped me and in that remote place, the only man anywhere around was his own son!

As I started back to town, I saw the old man waiting for a bus beside the road, so stopped and gave him a ride. On the way to town I told him how I had bought the wire clippers and released the cat, and that his son had no idea I had even been there. Then I handed him \$25 and said, "This is to pay for the six chickens the cat ate. You better use it to buy some wire to build a cat-proof coop to shut them up at night, because if you trap or harm another ocelot and I find



out about it, I'm going to report you to the police, the military, and the Ministry of Environment, and am going to see they put *you* in a cage."

The old man laughed and promised to build a coop that would protect his chickens against... he then proceeded to list a whole bunch of wild animals that regularly stole his chickens. I counted up the cost of all the chickens he said he had lost to this cat and other wild animals and pointed out how much cheaper it would be to build a preda-

tor-proof coop than to go around trapping animals after they'd killed his chickens.

The last thing I told him, as I let him out in town, was, "God gave ocelots the right to eat all the birds that live in trees. So if you don't want them eating yours, you better put your chickens in strong coops. Otherwise the ocelots will get them and if you harm the ocelots, me and God are going to get you!"

I didn't tell him that the god I meant was the jaguar god. •



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Prized poop

Using fecal hormone analysis to monitor reintroduced Canada lynx

By Kerry Petterson

Jen struggled through the snow. It was a sunny Colorado day, but at 11,000 feet, the temperature was about 10° below, and the snow was deep. There was no time to rest, though. She was on a mission. She followed the fuzzy round tracks through a dense young spruce stand that scratched her face and knocked her hat off. Unlike Jen, the owner of the tracks had apparently floated across the snow and gracefully maneuvered through the spruce branches. Jen trudged on, and then she saw it—lynx scat!

Meanwhile, halfway across the country, Lynn Culver was making her daily rounds. It was a cold day by Arkansas standards, and Lynn was bundled up as she took care of her cats. But her three lynx looked perfectly comfortable. As she approached their enclosure she checked the usual spots—sure enough, the red one, the green one, and the plain one were all in the same spots as they were yesterday! (The scat, that is.) The food dye that Lynn was feeding her lynx revealed that they had apparently claimed their own personal pooping spots.

You may be wondering why Jen and



Lynn are so excited about lynx scat when the cats themselves are so much more alluring. Truth be told, they may not be as excited about it as I make them out to be. But I'm thrilled about all the lynx poop they are finding, because there is a wealth of information contained within each piece of feces. Fecal matter absorbs things from the body as it passes through. Therefore, it provides a window into what is actually going on inside the body without ever needing to capture, anaesthetize, or surgically alter the animal. We can find out what the animal is eating, if it has parasites, if it is pregnant, and whether or not it might be stressed. As a graduate student at Purdue University, I am hoping to capitalize on the data stored in these little "nuggets" to learn about the physiology of these beautiful, elusive felines.

My Obsession with Scat

I have always loved animals, and have known that I wanted to work with them. As a young kid, I plagued my parents with the injured turtles, abandoned baby birds, and other animals I brought home to add to our menagerie of pets. In high school and college I worked at a vet clinic, and after college I spent several years working as a field biologist. Working with vets helped me appreciate the value of physiology and fueled my passion for understanding how the body works. If you can figure out what is causing an animal's problem, then you can actually treat the source of the problem and not just the symptom. However, my field jobs gave me a chance to work with exotic, wild animals and learn about how they behave in their natural habitat. As a field biologist, I was able to obtain valuable information that could help protect these species. I just needed to find a way to combine these two interests. Scat, oddly enough, seemed to hold the key.

Two years after we graduated from college, my husband and I worked for a snowshoe hare project in Colorado. The project was connected to the current Canada lynx reintroduction effort in Colorado. In addition to learning about snowshoe hares that winter, I also became intimately involved with the lynx reintroduction.

Letting the Cat out of the Bag



In 1999, the state of Colorado released the first Canada lynx as part of a large-scale reintroduction effort. (See the January 2006 issue of National Geographic for more details about the lynx reintroduction.) It had been 26 years since lynx disappeared from these mountains, and now they were on their way back. But the exhilaration felt by the biologists after those first few releases faded as the death count rose and biologists failed to find any sign of kittens. Even when survival began to improve, kittens remained absent. Critics of the project cited the mortality rate and lack of reproduction as a sign of failure.

However, it is not unusual to have low survival and reproduction during the early stages of a reintroduction effort. Consider it: an animal is moved from the wild to captivity, anaesthetized for exams, transported thousands of miles, held in pens with "strangers," and then released in a foreign environment. It's not a big surprise that reintroduced animals don't exhibit typical biological patterns. Biologists have proposed several explanations for what might cause this "reintroduction effect," but very few studies have actually investigated these theories. Part of the difficulty with answer-

ing the question “Why does this occur?” is that many reintroduction programs fail to monitor the animals after they are released.

The Colorado Division of Wildlife has implemented an impressive post-release monitoring program under the direction of biologist Tanya Shenk. All of the released lynx are fitted with radio collars so biologists can monitor them. Nearly every week for the last seven years, a pilot has flown over the study area to find each lynx and make sure the collar was not emitting a mortality signal. In the winter months, biologists (such as Jen) track the lynx on foot to get more detailed information about lynx behavior. They follow an individual’s tracks through the snow, recording information about the habitat the lynx moves through, where it rests, what it kills, which other lynx it crosses paths with, etc. And they also collect any lynx feces that they find.

The Power of Poop

Biologists initially collected the fecal samples for diet analysis. However, there was much more information stored inside these packets. There are thousands of hormones that circulate through an animal’s



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body in the course of a day, helping to ensure that the body continues to function normally. Steroids are one class of hormones that play a critical role in physiological processes. (Just ask athletes how powerful these hormones can be!) This class includes several hormones that are important for reproduction (testosterone, estrogen, and progesterone) and also hormones that help the body respond to stress (glucocorticoids). While the body “recycles” most hormones, it disposes of steroid hormones in urine and feces. Fecal hormone monitoring is rapidly becoming a popular tool for monitoring an animal’s reproductive status or stress level. This unique approach to post-release monitoring could provide a new perspective on how the reintroduction process impacts lynx.

Together with Dr. Nadja Wielebnowski, a behavioral endocrinologist at Chicago’s Brookfield Zoo, and Dr. Tanya Shenk, the head biologist for the lynx reintroduction, I developed a project that would help us understand what caused poor reproduction and survival during the early stages of the reintroduction. By combining the behavioral and ecological data collected by field biologists with the hormonal information that I could obtain from the fecal samples, we could begin to answer a lot of questions about the reintroduction effect. Does the reintroduction process trigger a chronic stress response in released lynx? If so, does this stress response suppress reproductive hormones and inhibit mating? Or, are stress levels normal but lynx need time to adjust to their new surroundings? Or, are the lynx ready and willing—physiologically speaking—to breed, but they can’t find a mate because the population is too small and dispersed? Or maybe there’s some combination of these factors? If we could figure out what caused poor survival and reproduction, then maybe we could do something about it.

Unfortunately, the power of lynx poop lies not only in the information it contains, but also in its smell. Astrid Bellem, the lab manager at Brookfield Zoo, has declared that lynx poop is one of the most potent varieties of poop out there. And she has worked with samples from more than 35 different species!

The Catch

There was one problem with using fecal hormone analysis to monitor the physiology

of reintroduced lynx. No one had ever studied lynx endocrinology (hormone expression), using either blood or feces. Without knowing what “normal” patterns of hormone expression are for Canada lynx, it would be very difficult to tell if the reintroduced lynx were not “normal.” In order to overcome this problem, I set out to find people that owned lynx and wouldn’t mind collecting poop for me (like Lynn!) By collecting fecal samples from lynx that are successful breeders, unsuccessful breeders, singly-housed, juveniles, and moved between institutions, we are beginning to put together a much more complete picture of lynx endocrinology.

Several FCF members have played a critical role in the life of this project. Tracy Wilson was one of the pioneering poop collectors. Even with several trips to Playa de Oro, intense downpours that washed the samples away, a sprained wrist, and two comical males that preferred to play with their food rather than eat the dye that was in it, she still collected a load of samples. These samples provide several key pieces that will help us complete the puzzle of lynx physiology.

Where is the Project Headed Now?

Things are looking much more positive for the reintroduced lynx. Although it took

five years, they have started to reproduce. Biologists found 16 kittens in 2003, 39 kittens in 2004, and 46 kittens in 2005! This is exciting, because it allows us to compare patterns of behavior and hormone expression before and after the lynx started breeding successfully.

Fecal samples from captive lynx are still being collected and analyzed. Once we establish a basic understanding of hormone expression in lynx, we will be able to start asking more refined questions about lynx physiology.

Throughout this project, I have been astonished at how willing people are to help some stranger asking for poop! As an animal lover, I will admit that it is hard to only be able to see the feces and not the actual lynx. Therefore, I am incredibly grateful to all of my collaborators who have sent me pictures and stories of their lynx. Then it is not just a piece of poop that I am working with; it is Kenobi’s poop. A fellow grad student has a poster asking “Have you hugged your organism today?” Sadly, my answer is almost always no, but I know that many lynx lovers around the country are hugging their lynx for me!

If you have questions or comments about this article, please contact Kerry at kerrypettersen@yahoo.com.

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Fishing cats of Coringa Sanctuary

1. Profile of the Coringa wildlife sanctuary, East Godavari Dist, Andhra Pradesh, India.

COUNTRY: India - Andhra Pradesh State

NAME: Coringa Wildlife Sanctuary

IUCN MANAGEMENT CATEGORY IV (Managed Nature Reserve)

LEGAL PROTECTION: Completely Protected.

SANCTUARY ESTABLISHED: July 1978

GEOGRAPHICAL LOCATION: Near Kakinada, East Godavari District, Andhra Pradesh.

LATITUDE: 16°30'-17°N

LONGITUDE: 82°14'-82°23'E

AREA: 23,570ha or 235.7Sq.km

PHYSICAL FEATURES: A large area of the sanctuary is part of the delta of the Godavari River and is covered with natural mangrove forests. Most of the mangroves remain intact and the forest department is seriously involved in mangrove management. By this I mean they help in assisted plantation of mangrove species of trees in areas that are degraded or naturally destroyed. The mangroves are connected through intricate natural and man-made canals. While some canals help in navigation, others are useful to carry the estuaries waters to the newly planted plantations.

ALTITUDE: sea level.

VEGETATION: Mangrove forests, 35 plant species are present in this sanctuary belonging to 24 families. The most common species being *Avicennia* Spp, *Bruguiera gymnorrhiza* (oorudu), *Excoecaria agallocha* (Tilla), *Rhizophora* Spp, *Ceriops decandra* (calhasu), *Sonneratia apetala* (kalinga), *Aegiceras corniculatum* (guggilam), *Hibiscus tiliaceus* (ganga ravi or gurappa dekka).

FAUNA: *Lutra perspicillata*, smooth Indian otter or locally called (neeti kukkalu – water dogs), *Prionailurus viverrinus* fishing cats (Bavura pilli), *Canis aureus* golden jackal (Nakka), *Macaca mulatta rhesus* macaque. *Golunda ellioti* Indian bush rat, *Funambulus palmarum* three-striped palm squirrel are some of the animal species found in the sanctuary.

Birds include kites, egrets, storks, herons,

snipes, ibis, parakeets, drongos, flycatchers, ducks, and 140 other species. Pelicans, some ducks and flamingos are winter migrants.

Reptiles include snakes, monitors, and crocodiles. There are also sea turtles in the sanctuary.

of 60cm, they are replanted in the mangroves. The species include *Avicennia* Spp of trees, *Rhizophora conjugata* (locally termed ponna), *Aegiceras* etc.

STAFF: Total staff of 11 forest department personnel guard and work in the sanctuary.



The dark portion on the map is the Coringa Sanctuary.

CULTURAL HERITAGE: An old dilapidated lighthouse built by the British stands in the middle of the mangroves. (Hope Island forest beat) The local fishermen have adapted well to the low and high tides in the mangroves and they move about navigating the tidal flows. Seeking protection, they tie up red strips of cloth on some of the trees in the mangroves as an offering to the goddess of the ocean.

CONSERVATION MANAGEMENT: Creation of the EDC's (Eco Development Committees) and involving the villagers in the management works carried out in the mangroves. This includes collection of seeds, seedlings, and afforestation on the banks by digging channels 12.5m apart. Seedlings are grown at a local forest department nursery and once they attain a height

LOCAL ADMINISTRATION: The sanctuary is managed by the divisional forest officer, Rajamandry. A range officer works from Kakinada town.

SCIENTIFIC RESEARCH AND FACILITIES: Scientific research is conducted on different elements in the sanctuary area. However the wildlife department is not involved in direct research. Research can be conducted staying just on the periphery of the sanctuary or in the comfort of the town of Kakinada. Locals can be hired to work alongside the research team and as I discovered, they are a good source of information on local fauna and flora and can easily navigate through most parts of the mangroves. One must have access to boats to work in the mangroves. Motorized and non-motorized boats can be hired from the locals for

use in the mangroves. I used a non-motorized boat for my work and found it extremely handy. However the amount of ground one can cover in a non-motorized boat is limited and mostly dictated by the tidal currents. The local wildlife office has little knowledge on the prior studies conducted at the Coringa wildlife sanctuary. Hence, details on most of the prior study in the area cannot be locally generated. The AP wildlife office located in Hyderabad may have some useful information.

LOCAL POPULATION: Fishing communities and golla communities (buffalo herders) are the main two communities living around the sanctuary. The fishing community have a direct dependence on the estuary. They fish, collect fuel wood, and extract timber from the mangroves. Hunting is carried out opportunistically and it did not appear very common.

The golla community people breed a particular type of water buffalo that's adapted to the salty conditions of the mangrove. The buffalos are left to stray in the forests and in the evenings the owners come into the mangrove and call the buffalos. The buffalos are then milked and left to go back and stray in the sanctuary.

DISTURBANCES, DEFICIENCIES AND MANAGEMENT PROBLEMS:

Fishing in the mangroves generates income to the local fishing communities. The level of disturbance to the ecosystem because of this is not clearly visible.

Direct release of industrial wastes by the industries located upstream has a huge impact on the ecosystem. The waters reek of molasses and are dirty brown. The fisherman who accompanied me complained that fish production has drastically declined in many parts of the mangroves and that in some locations they stopped fishing. I have noticed that during the low tide when the waters from the mangroves recede into the sea and the mangroves, in turn, are fed by the waters from the upstream rivulets and streams, the stench is at its worse. Also small fish and prawn start surfacing probably due to the toxicity level.

Management problems: The officers complained of insufficient funds for the patrolling the mangroves. They say that fuel costs have gone so high and the state forest department simply slashed the budget on fuel.

The department is involving the locals in forestry works, however the generally good wage earned by the fisherman cannot be met when one is hired by the department. Hence there is an air of dissatisfaction amongst the locals to work as day wage laborers in the mangroves.

2. Field report: First survey on the habitat of the Fishing cats of Coringa Wildlife Sanctuary. N 16° 50.384', E 082° 14.504'.

Date: 28 August to 5 September 2005

Summary:

The mangrove forests of Coringa sanctuary are one of the only surviving fishing cat habitats of any considerable size on the east coast of India. The sanctuary was surveyed for mammal species richness by studying the habitats for signs and tracks and for indicators that determine the health of the habitat. Indeed, the fishing cats do exist in these habitats and nearly five different species were recorded in four days of survey. Interacting with the locals provided information on their dependence on the mangroves.

Methodologies:

Secondary information on past studies in the reserve, on conservation action, patrolling, and management problems were collected from forest officials based in Kakinada town. Unstructured informal interviews were conducted with villagers from Ravannapalem, Pedda Boddovenkatayapalem, Tallarevu, and Bhairavpalem. Their fishing ranges, areas where they have seen fishing cats and smooth Indian otters in the past weeks, their interaction with the forest staff, and their opinions on the sanctuary and its future were probed. Relevant information was marked on the map of the Coringa sanctuary.

Four trips were made into the mangroves around the village of Ravannapalem, an area of approximately 25 sq km. One manually-steered fishing boat was hired and we followed the edge of the forest looking for paw prints of otters and fishing cats on the soft silt of the mangrove. Wherever evidence was found, the forests in that region were explored on foot and existing habitat structure was recorded. Wherever evidence

of animal activity was found, a GPS coordinate was marked on the map. Photographs were taken of the habitat and the evidences found.

Findings:

18 species of mangrove trees were identified in the surveyed areas. *Avicennia* Spp of trees are cut for timber and used locally in house construction. The wood has little commercial value because of its short life span. Other woods found in the mangrove are only used for fuel needs.

Ponna is commonly found in the mangroves and provides excellent cover for many mammal species. During the low tide these patches are accessible on foot and evidences of animal activity can easily be studied.

The hot parching sun quickly dries up the surface clay soils and paw prints like those left behind by a fishing cat can easily be found. On closer observation, it was found that the fishing cat was actually busy stalking a bush rat. *Golunda ellioti*, the Indian bush rat is a common rodent species found in the mangroves. 122 nests of these tree dwelling rodents were counted in the survey period. The bush rat is a rather large rat that dwells in elaborate nests constructed of fallen leaves, twigs, and sometimes



Rhizophora conjugate (ponna)

decaying vegetative matter. One such nest was examined and it measured six feet in length and four feet in height. Two occupants, a male and a female (swollen nipples), were recorded in the nest.

The Indian Bush Rat may also be part of the diet of the fishing cat and *Canis aureus* golden jackal also found in this habitat. Once we leave the banks of the mangroves and head into the deeper forest, large empty spaces like below exist.

Notice the soft cracked clay soil and the



**Coordinates of fishing cat tracks; N
16°50.350', E 082°14.950'**



Mangroves at low tide



**The large dark portion in the Avicennia
officinalis tree (nalla mada) is the nest of
the Indian Bush Rat**



Cracked soil showing animal prints



**These reptiles may also be part of the fish-
ing cat's diet.**

numerous prints of animals that crisscrossed this area. Jackals, fishing cats, rodents, rhesus macaque, and small Indian mongoose foot prints were recorded in this region. In the cracks of the soil are found crickets and other insects and these insects may also be part of the diet of the above mentioned animal species. Over 120 species of birds were recorded from this sanctuary area. The low tides leave elevated mudflats. These contain small fish, shrimps, mollusks, and attract avifauna and mammals.

The soft silt of the mudflats records all animal movement as shown in the above picture. The paw prints are those of *Lutra perspillata* smooth Indian otter. The mangrove habitat of Coringa seemed to be a haven for the smooth Indian otter. The otter's tracks were frequently recorded on the muddy banks. The mangroves also support certain snake species such as *Trimeresurus gramineus*, the green tree viper (*pasarika pamu*) which has adapted itself to the watery conditions of the mangroves.

Conclusions including suggestions for future work.

The mangroves of Coringa sanctuary seemed to be a perfect habitat for the long term survival of the endangered fishing cat. The signs of the cats were recorded on many occasions and the mangroves seem to be in good health and provide the needed cover and prey for the survival of the fishing cat.

Direct human impact on the mangroves is restricted due to the vastness of the region and due to the active involvement of the locals in fishing industry. On top of this, the mangroves are declared a protected area and major exploitation of the region is prohibited. Indirect threats like the pollution of the waters from upstream industries and the resulting decline in the fish catch and silting up of the mangroves may have long-term impact on the ecosystem.

This short survey revealed a lot of information on the species in the habitat and the health of the habitat and this information is useful to formulate a short-term study on the ecology of the fishing cat in Coringa. Information on the abundance of the fishing cats and the consumed prey species will be vital to reassure ourselves about the sure survival of this endangered species in the sanctuary.

Acknowledgement

I thank Mr. Vijay Kumar (Director Vizag Zoo) for helping me kick-start the first survey. The forest department officers and staff of Kakinada and Rajumandra divisions were very resourceful. Local villagers who worked alongside me were invaluable guides and helped me learn many things about working in the mangroves. My field help, Mr. Silas Immanuel and Mr. C. Vandan kept the momentum up and helped me finish my work in this mosquito-infested area. My supporting organizations EAZA, Ouwehands Dieren Park, and FCF without whose generous contributions the small wildcats of India would have been ignored. Thank you all for trusting me with this exciting work on India small wildcat project.

Contact Address.

Shekhar.K.S

Principal Investigator

India Small Wildcat Project

Society for Nature Conservation and Education

Flat No 10, Bhavana Enclave #2

Rajendra Nagar, Visakhapatnam- 16

Andhra Pradesh, India.

E-mail:

shekhar_k_s@yahoo.com

sncae_india@yahoo.com

Tracy Wilson becomes project facilitator for PdO

Rosa Jordan is retiring from her Earthways position as the international project facilitator for the Playa de Oro Reserve. Both Rosa and the community have invited me to fill this position that she will be vacating. This would entail working directly with the reserve and the community, and is something I would very much like to do because I think it will contribute to the project's continuing success of habitat and wild feline protection.

FCF is also very important to me, which is why I have invested over five years of hard work as a board director for FCF. However, I feel that I cannot do justice to both positions and there could be some conflicts of interest related to FCF's continued support of the reserve. I have given this serious thought for the past four months since receiving this invitation, deciding where I should apply my efforts, in terms of which would be best for FCF and the reserve.

FCF has at its disposal many capable, willing volunteers, whereas those of us who know Playa de Oro realize that this tiny community (smaller than the membership of FCF) has only a few individuals with the necessary skills to pursue the reserve's conservation goals. But there are things needed to ensure the success of the reserve that the local people simply cannot do yet. The village has no electricity, phone, or mail service, and no one in the village speaks English, so the project facilitator is their main communication with the outside world. All travelers, research, donations, fundraising, promotion, and other projects for the Playa de Oro reserve and community go through the project facilitator. I feel that the Playa de Oro Reserva de Tigrillos needs my assistance at this time more than FCF and that FCF will not suffer as a result of me resigning from my board position one year early.

As most of you know, I began as a volunteer at a big cat sanctuary, then started my own exotic cat sanctuary, and eventually became FCF's Director of Education and Conservation. During my two terms in that position, I mostly focused on education of exotic cat owners and rescuing/placement of exotic cats. Over time I became more conservation-minded. Now, in my third

term on the FCF board, conservation has become my main focus as well as my passion. Being part of the development and maintenance of such a rare wild-cat habitat feels like a natural step in my volunteer career of working for the welfare of wild felines. While I am sad to leave behind my board position with FCF, this is a rare and exciting opportunity where I can directly contribute to the conservation of wild felines on an international level.

Rosa Jordan was the force in getting the reserve started and has guided its development for ten years. I have some big shoes to fill and a lot of hard work ahead of me, but I am looking forward to the challenge. I am honored that Rosa and the community of Playa de Oro think highly enough of me to offer this opportunity to me. Rosa will assist me as long as needed in order to ensure a smooth transition for the reserve and the community. Understand that I am not leaving FCF entirely, but just resigning from my board position. As a member of FCF, I will continue working and managing any projects that the FCF board wishes to continue to support (or start) in the future at the Playa de Oro reserve such as camera trapping, the conservation patrol, or tours for FCF. I would be pleased to continue facilitating, monitoring, and reporting to you on FCF's efforts at the Playa de Oro Reserve as I am sure the community of Playa de Oro will also be pleased with FCF's continued support.

Therefore, for reasons stated above, I hereby resign from my position as Life Director from the FCF board of directors, effectively immediately, and accept responsibility for my new position as the international project facilitator for Playa de Oro Reserva de Tigrillos.

For the cats,
Tracy Wilson



The President Comments:

Tracy Wilson, one of the FCF Life Directors, announced on January 29, 2005 that she is resigning from her position as FCF Life Director in order to serve in her new position as the international project facilitator for Playa de Oro Reserva de Tigrillos in Ecuador. Rosa Jordan served in that position and guided the development of Play de Oro for the past ten years. It was a great honor to Tracy for Rosa to offer her the position. Tracy will do an excellent job, the same she did for FCF.

I will greatly miss not having Tracy on the FCF board for the rest of my term as president. A few years ago, while Tracy was the FCF Conservation/Education Director, she led FCF in the direction of supporting field research that included starting the Playa de Oro fund raising field trips. During that same time, she spearheaded getting the FCF husbandry training program going that our past president George Stowers had developed. That direction is something I'm very proud of and glad that myself and the rest of the FCF board was able to support her goals.

Tracy was also one of the most dedicated and hard working members of the FCF board and I could always count on her. She did this all while her husband Keith was over in Iraq fighting the terrorists, taking care of her many animals which included rehab of native wildlife, running her Wild Tracks business, and having some serious medical problems.

All of you members, if you have not already done so, need to give a big "thank you" to Tracy for her dedication, leadership, and hard work she did for FCF. If you attend the FCF national convention this year, give her a big hug. She is a wonderful lady.

Robert Turner

Your best Shot



Top to bottom:

Chewy—Erika Columbo • Isis
serval balances his diet—
Roger Newson • Stephi
lioness is a little hard in the
furnishing—Gail Laviola •
JAGS Safari Park—Tom Har-
vey

Upcoming Playa de Oro Reserve Group Tours

May 19-26, 2006, with Tour Guide & professional photographer Terri Nash

June 16-23, 2006, with Tour Guide Tracy Wilson

Join Feline Conservation Federation on our eco-tours to the Playa de Oro Reserva Tigrillos for an adventure of a lifetime! The Playa de Oro Reserve in Ecuador focuses on preserving the habitat and native wild felines while providing low-impact eco-tourism to help financially sustain the reserve.

Ecuador is one of the most biodiverse and culturally rich countries on earth. Its capital is in the high Andes, surrounded by snow-capped volcanoes. From Quito, our tours travel through stunning mountain scenery to Otavalo, home to South America's friendliest and most artistic tribe, there to spend an afternoon in the world-famous Otavalo artisans' market. Next morning we travel by mini-bus down the western slope of the Andes into the Choco rainforest. Where the road ends, we transfer to a dugout boat for a trip up the swift Rio Santiago to the Afro-Ecuadorian village of Playa de Oro. Then beyond, into the heart of Playa de Oro's rainforest reserve. During our week-long stay in the reserve's jungle lodge, we will follow trails through the rainforest, boat and swim the river, dance with the locals to Afro-Latino rhythms, eat great meals incorporating traditional foods such as plantains, and sleep to the sounds of the jungle.

The cost of this amazing adventure is just \$700 US excluding airfare. (Fly to Quito, Ecuador) This includes two nights at a charming bed and breakfast in Quito (breakfast included), one night at a B&B in Otavala (breakfast included), five nights at the Playa de Oro Reserve Lodge (all meals included), boat transportation, private van transportation from Quito/Otavala/Selve Alegre, a knowledgeable tour guide, day visit to Otavala market, Playa de Oro village tour, village children dance performance, most of your meals, and jungle guide service.

Your 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 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, coming to know the local people, and experiencing their river and ancestral forest as they do.

Space is very limited on each tour, so please sign up as soon as possible to reserve your space. Please contact me for more details and to confirm space avail-

ability on tour dates. For more info visit FCF's website at:

<http://www.thefcf.com/conserv/tours.asp?key=186>

Or Playa de Oro's website at:
<http://www.touchthejungle.org>

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Surveying for Ocelots in Northeastern Mexico A Step Toward Ocelot Recovery in Mexico and the United States

Ken Kaemmerer and Arturo Caso,
Dallas Zoo

Proyecto de Felinos Silvestres de México
and Texas A&M University at Kingsville

Recently the Feline Conservation Federation awarded us a grant to purchase four remote sensing cameras to set up a field survey on a private ranch in northeastern Mexico. This article is to tell you about the exciting research that is being done in “our back yard” and how this will contribute to the conservation recovery efforts of the ocelot both in Mexico as well as in the United States.

On the Tamaulipan coast of northeast Mexico, the natural vegetation corridor has been destroyed throughout almost 90% of its original range due to different human activities such as urban development and farming. One of the side effects of deforestation is the space lost for the survival of endangered species such as the ocelot (*Leopardus pardalis*). However, the last remnants of natural vegetation in northeast Tamaulipas are left on private cattle ranches.

The State of Tamaulipas is the most northeastern state of Mexico and borders the United States. The northernmost distribution of the ocelot occurs in south Texas and northeastern Mexico (Tewes and Everett, 1986). In this part of Mexico, especially within 125 miles of the U.S.-Mexico border, little is known about the ecology and distribution of the ocelot and most of the information is based on anecdotes.

Documentation of ocelot populations and suitable habitat in northeastern Mexico is important for establishing future linkages with the U.S. population, for identifying important areas for future habitat restoration, and for identifying source populations for potential translocation of animals to the U.S.

Genetic variability of the ocelots in Texas is declining because the habitat is scarce and discontinuous, thus resulting in inbreeding (Walker, 1997). Translocation of ocelots from Tamaulipas to Texas may be a future option to restore the gene flow and is a strategy presently being discussed by the

U.S. Fish and Wildlife Service Ocelot Recovery Team. Likewise, in Mexico translocations can also be a future conservation tool, and translocations within Mexico do not involve the political bureaucracy incumbent with moving an endangered species within the U.S. Therefore an experiment within Mexico to test what may happen after ocelots are translocated will be an important precedent for ocelot recovery in both countries.

A private ranch in Tamaulipas has been identified as having ocelot-suitable habitat, but needs to be thoroughly surveyed for res-

ident ocelots and other carnivores to determine whether it would be suitable for an experimental translocation within Mexico. “Las Carreras” Ranch is located in East Tamaulipas (Figure 1) adjacent to the Laguna Madre. This ranch forms a peninsula between the northern Laguna Madre of Mexico and the Catalan Laguna. Habitat on this ranch is considered coastal thornshrub and has not been altered during the last 20 years. An environmental Mexican non-governmental organization, Pronatura Noreste, received permission from the ranch owner to facilitate access to the land for field research by Arturo in 2004. According to the ranch owner and hunting records, ocelots used to occur there, but because of hunting, have not been seen in 20 years. In 2005, with support from the Dallas Zoo and Pronatura Noreste, Arturo set out live traps and caught three male bobcats over 220 trap nights.

Prior to a translocation, utilizing International Union for the Conservation of Nature’s Species Survival Commission guidelines for re-introductions (IUCN/SSC, 1995), it is necessary to thoroughly document the presence or absence in the area of the species proposed for reintroduction. Because this area reportedly once had ocelots and the habitat looks suitable for ocelots, this would be an ideal area for a future translocation study. In addition, since the ranch is on a peninsula, the area can be more carefully monitored for transient intruders as well as translocated ocelots that might disperse.

This study will document the presence of all carnivores on Las Carreras Ranch in Tamaulipas to determine if the area would be suitable for a subsequent translocation of ocelots from another location in Mexico. Other ranches in the general vicinity and within 125 miles of the U.S. border may also be opportunistically surveyed to document ocelot presence. This will be accomplished through the use of remote sensing cameras provided by a grant from FCF or with live traps.

Remote sensing cameras have become an accepted and well-used tool to document wildlife for field research (Wemmer, *et al.*,





Arturo Caso

Camera trap catches ocelot and kitten

1996). “Camera trapping” consists of attaching a remote sensing camera with a built-in infrared beam switch to a tree facing a game trail. On the opposite side of the trail is placed a scent pad with feline attractive lures. When any animal crosses or “breaks” the infrared beam, the camera turns on and takes a picture). Multiple cameras are desired to cover a greater portion of the 2,000 hectare ranch in the same time period. The traditional method of live trapping requires the field researcher to check every trap every day and is very time and financially expensive. Camera traps can be left in place for up to two months—as long as the batteries remain charged—allowing a field researcher to more efficiently use his time and greatly reduce field expenses. This study will utilize at least four CamtTrakker, “Digital Ranger” model remote sensing cameras.

The monitoring and relocation of camera traps throughout 2006 will allow for more coverage of the ranch with reduced expense and time. After the cameras have been left in a location for at least a month, the stored images will be examined and if no ocelots are recorded, then the cameras will be moved to another part of the ranch. Once Las Carreras Ranch has been thoroughly surveyed, the cameras may be relocated to other area ranches to document the resident carnivores.

We anticipate that bobcats will be photographed since they were live trapped in 2005. There remains the possibility that we will document ocelots and perhaps even jaguarundis, since they often share the same

habitat as ocelots. Beyond this we will generally document the biodiversity of the area. By the end of 2006, the ranch will have been thoroughly surveyed and the presence or absence of ocelots and any other carnivores thoroughly documented. This would provide a successful conclusion to this study and provide the information necessary to plan for the next phase of the translocation study. The documentation of the presence or absence of ocelots and resident competitors plus evaluating the general biodiversity of the area will help us determine if Las Carreras Ranch is a suitable location for a proposed ocelot translocation study.

We are grateful to FCF for providing funding toward this important research. We will keep you updated on the results and hope you will continue to support the conservation and recovery of the ocelot. •

Literature Cited

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About the authors:

Arturo Caso is the one who performs the research in the field and coordinates all research activities in northeastern Mexico amongst government officials, non-governmental organizations, private ranch owners, students, and with collaborating institutions such as the Dallas Zoo and Texas A&M. He has conducted numerous surveys of felids (ocelot, *Leopardus pardalis*; margay, *Leopardus wiedii*; jaguarundi, *Herpailurus yaguarondi*; bobcat, *Felis rufus*, and jaguar, *Panthera onca*) on private and public lands. He has also conducted long-term field research of carnivore populations, with particular emphasis on ocelots and jaguarundis, since 1991 on two conjoined private ranches (Caso, 1994). Arturo holds a master's degree from Texas A&M and currently is completing his Ph.D. requirements also at Texas A&M while continuing his research on Mexican carnivores. He is a member of the IUCN Cat Specialist Group and is co-leader of the US Fish and Wildlife Service Ocelot Recovery Committee, serving as the Mexican leader for this bi-national committee.

Ken Kaemmerer, is Curator of Mammals at the Dallas Zoo and is the chairperson of the American Zoo and Aquarium Association's Ocelot Species Survival Committee, helping to coordinate captive population and management plans as well as education and conservation efforts. In addition he serves on the USFWS Ocelot Recovery Team as the AZA's representative. At the Dallas Zoo, working with the Curator of Conservation Education Science and numerous research technicians, he has been working on ocelot research, both in captivity and in the field (with Arturo), as well as producing educational materials for the past 15 years.

Winner of FCF's African Safari Raffle Announced

Five months of raffle sales to raise funds for feline conservation reached a successful climax when Senator John Waterman, Indiana, drew the winning ticket Sunday, February 12.

The official ceremony took place at the Exotic Feline Rescue Center in Cedar Point, Indiana, home to more than 170 exotic felines.

Senator Waterman's daughters Elizabeth and Sarah helped by thoroughly spinning the basket of tickets before Senator Waterman pulled out the winner, reading off the name, "Mike Friese."

Senator Waterman officially notified Mike by speakerphone. Mike was very surprised and elated. FCF President Robert Turner then asked Mike if he would accept the prize. The reality set in for Mike Friese, who took a \$10.00 chance and won a dream safari to Africa.

EFRC director Gene Herberg and Max the tiger cub, FCF officers Bob Turner, Kevin Chambers and Harold Epperson, FCF members Patty Turner and Peggy Epperson, Senator Waterman's wife, Cheryl and their son and two daughters, witnessed the drawing of the African Safari Raffle.

The Feline Conservation Federation raffle grand prize of international airfare and six nights stay for two people at one of three possible Zulu Nyala lodges sold over 725 tickets since it was officially opened September 2005. Residents of 39 states and three countries purchased raffle tickets. Over 60 FCF members purchased or sold tickets and 64% of the raffle sales were to non-FCF members. FCF successfully reached out beyond its membership to raise this money for conservation. Twenty FCF members sold over ten tickets enabling them to receive bonus raffle tickets. FCF president Robert Turner won the prize for most tickets sold—selling an impressive 96 African safari raffle tickets to friends, family, and co-workers.

Net proceeds for the FCF Conservation Grants program will be around \$3,800. Grants provide funding for research and conservation of wild felines around the globe.

In 2005 FCF approved conservation grants to study wildcats in Namdhapa Tiger Reserve in India, for camera traps in Mexico for an ocelot translocation project, and for camera traps in Borneo to look for bay cat, clouded leopard, flat-headed cat, leopard cat and marbled cat.



Senator John Waterman reads the tickets as FCF president Bob Turner and Waterman's daughters, Elizabeth and Sarah, look on.



Max the tiger verifies the authenticity of both Waterman and the ticket.

Mike Comments:

On Saturday the phone rang a little after 1:00pm Indiana time. I jumped, letting myself imagine it could be *the* call. But it was my buddy and it was Saturday. He joked that he would call me on Sunday so I could again pretend that I won.

When I picked up the phone on Sunday, somebody identifying himself as Senator John Waterman told me that I won. I was trying to figure out how my friend figured out the name of the dignitary who was

going to select the ticket. My first thought: how very clever of my friend. And then Bob Turner's familiar voice got on the phone, making it all real.

I have never been to Africa and it was at the very top of my to-do list. And I was enthusiastic about this raffle because even if I "lost", my money was still going toward conservation of cats in the wild. Thank you, FCF!



Feline Conservation Federation

FCF Upcoming Events

Board of Director nomination period:
January 1 to March 20, 2006.

**Membership participation period for
proposing constitutional amendments:**
February 1-March 31, 2006.

Playa de Oro Tours:

May 19-26, 2006 with tour guide professional
photographer Terri Nash

June 16-23, 2006 with tour guide Tracy Wilson
Contact Tracy Wilson

Husbandry Course:

February 25, 2006. FCF Basic Husbandry
Course, Holiday Inn Express, 1017 N Main
Street, Cloverdale, IN 46140. Hosted by Mid-
west Exotic Feline Educational Society and
Exotic Feline Rescue Center. Contact Pam
Hotle, MEFES or Carol Bohning, Director of
Conservation & Education

July 26, 2006. Cincinnati, Ohio Hosted by the
Feline Conservation Federation

FCF Annual Convention

July 27 – July 29, 2006, Cincinnati, Ohio.
Reserve your vacation time now. Look for hotel
info and other details on our web site and in the
Jan/Feb issue of the FCF magazine



Alvin is a Canada lynx owned by FCF member and breeder Jim Wilcockson in Indiana.

Lynn Culver