# LIOC-Endangered Species Conservation Federation





#### LIOC-Endangered Species Conservation Federation



This newsletter is published bi-monthly by the LIOC-Endangered Species Conservation Federation, Inc. We are a non-profit (Federal ID# 59-2048618) noncommercial organization with international membership, devoted to the welfare of exotic felines. The purpose of this newsletter is to present information about exotic feline conservation, management and ownership to our members. The material printed in this newsletter is contributed by our members and reflects the point of view of the author but does not necessarily represent the point of view of the organization. LIOC-ESCF, Inc.'s Statement of Intent is contained in our bylaws, a copy of which can be requested from the Secretary. Reproduction of the material in this newsletter may not be made without the written permission of the original copyright owners and/or copyright owner LIOC. Since the

newsletter consists primarily of articles, studies, photographs and artwork contributed by our members, we encourage all members to submit material whenever possible. Articles concerning exotic felines are preferred and gladly accepted. Articles involving other related subjects will also be considered. Letters and responses to articles may be included in the Readers Write column. Deadline for the next issue is the first of even numbered months. Please submit all material to the Editor. Persons interested in joining LIOC should contact the Term

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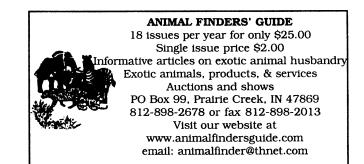
All ads in this publication are void where prohibited by law. All transactions are between buyer and seller. All buyers and sellers must have proper licenses and permits for all animals offered for sale or sold. LIOC-ESCF, Inc. does not necessarily endorse or guarantee the honesty of any advertiser. LIOC-ESCF, Inc. reserves the right to edit or reject any subscription ad. No blind animal ads will be accepted. Only LIOC members may place ads listing cats for sale. Adoption ads are free of charge for cats that need good homes where no money is involved in the transaction. All ads must contain the name of business or individual advertising. Ads must state whether the individual is a private owner or broker. Full current address with a phone number must be stated in the ad.

Ad rates for submitted photo-ready ads: 2 inches x 3.5 inches (business card size): \$20.00

**Cover:** Submitted by Tracy Wilson. Photo of lynx willed to Tracy by LIOC member David Busch, who passed away this Spring.

#### DISCLAIMER:

We cannot guarantee the printed quality of digital photographs. Please submit actual photographs or check with the editor regarding standards for electronic submissions whenver possible.



## Enrichment Workshop



Submitted by Deborah Ash

Isis Oasis Wildlife Sanctuary is hosting its first ever Exotic Feline Enrichment Day. Beginning at 9 A.M. on Sat., Aug. 24, 2002, attendees will first see a brief slide presentation on wild felines and handling safety. Thereafter, the day will be spent interacting with our cats and enhancing their lives.

At some zoos and wildlife sanctuaries, captive animals receive essential care, but not much to enrich their psychological well-being. Isis Oasis advocates improving the conditions of captive exotic cats through enrichment programs.

Ramses (ocelot)Photograph by Larry Lynch

Enrichment can be defined as any action that improves an animal's quality of life. A few methods used at Isis Oasis include: visual stimulation, textures, scents, feeding methods, and toys.

This event is a hands-on opportunity to handle ocelots, servals, bobcats, and a jungle cat. We will share with you all of our enrichment methods and allow you to put them to use— we welcome your creative ideas.

Exotic feline expert and founder of Isis Oasis, Loreon Vigne, will host the event.

The cost is a \$75 donation. Lodging is available for out-of-towners at our special group rate of \$40 for a shared room per night and \$80 per night for a private room. We are also offering dorm spaces for \$30 per day. Lunch and dinner will be included on Saturday. After dinner, certificates of completion will be distributed. Dress in old clothing and substantial shoes like sneakers or hiking shoes. If you want pictures, feel free to bring a camera.

Topics that will be covered include the following:

- Slide Presentation on Animal Handling Safety and Enrichment You will be assigned to a cat
- Animal Tour
- Lunch Served
- Hands-On Enrichment
- Feeding Time for Cats You will feed your assigned wildcat.
- More Enrichment
- Dinner
- Everyone will share personal observations of their assigned cat's behavior and response to the various stimuli

Those interested in attending should sign up soon because the most comfortable situation for the cats is a maximum of 2 attendees per enclosure. Registration must be done by phone. Have your credit card handy.

To register, contact Loreon at 1-800-679-7387. NO CHILDREN. For further details, visit our Web page: http://webpage.pace.edu/dash/wildcat.

## The Votes Are In!

### The Results of the Proposed Constitutional Amendment Ballots

Membership Voting on two constitutional amendments closed on July 16, 2002. The ballots received by the deadline were collected and taken unopened to an independent CPA by Life Director JB Anderson with a current listing of membership. The CPA worked with JB and our Membership Director, Leann Montgomery, to verify current membership status of all voters. The CPA tallied the results of the ballots and announced to the Board of Directors the end results with maintaining privacy of individual voters.

The first item on the Ballot was about changing LIOC-ESCF's name to Feline Conservation Federation. This item passed with over a two-thirds majority vote as required. Our new name, Feline Conservation Federation will take effect on August 1, 2002. This will be our last newsletter reflecting the name LIOC-ESCF. The Feline Conservation Federation is ready to move forward supporting private ownership of wild felines, conservation projects, and much more!

The Feline Conservation Federation, (FCF for short) still maintains the same goals and purpose as our former organization name, LIOC-ESCF. Feline Conservation Federation exists to further conservation of felid species with an emphasis on the efforts of individuals to gain knowledge of these wondrous creatures and promote captive propagation programs. We maintain the individual's right to own and propagate these animals in accordance with sound management practices. The FCF is dedicated to the preservation of these rights and the enhancement of these efforts through education and an open exchange of ideas and information among its members.

The Board of Directors will be working on implementing the name change over the next several months on items such as the newsletter, our website, and various other documents and materials. We will be reviewing any suggestions for new logos if you would like to present an idea to the board for review.

The second item on the ballot requested a change to current time restrictions for constitutional amendment proposals that would allow changes to the constitution to be made at any time. The vote failed, as it did not reach the two-thirds majority vote as required. Our current constitutional amendment process will remain the same, allowing constitutional amendments to be made every 2 years by a two-thirds majority vote.

Thank you to all members who have taken the time to voice your opinions by voting. Your votes and input help the Board of Directors work towards making this organization into what our members want and need. Your input is important! Let's look forward to a wonderful future as the

FELINE CONSERVATION FEDERATION!

Writing Your Will?



## Your Animals' Futures

#### By Tracy Wilson

What will happen to your cats after you are gone?

In early April this year, we lost one of our beloved LIOC members, David Busch, after a long struggle with leukemia. He was diagnosed about 2 years or so ago with leukemia, and of course he knew the odds of his recovery and was concerned about what would happen to his pair of Canadian lynx if he did not survive his illness. He talked with quite a few people to find someplace and someone he felt would give his pair of lynx the type of home he wanted them to have. David and I met at a LIOC convention a few years ago, when he enrolled in a husbandry course that I was instructing. After getting to know me and many lengthy discussions about exotic cats, he picked my facility to care for his lynx in the event of his death.

David was very careful about making his contingency plans clear and every detail covered. David was a Doctor and Scientist, so not many people come as detailed oriented as David! He had an attorney write up a will, that included naming a person to care for the lynx until they were in my possession and a person named to transport the lynx to me. He also opened a bank account with funds to cover the costs of transportation to me because he was located in PA and I was in AR, quite the distance. He also held state and USDA licenses, and he put his will on file with those authorities as well. He made sure that all of us named in his plans were aware of all the arrangements and what each of our duties and responsibilities would be.

David under went bone marrow transplants early this year, and had a long recovery and stay at the hospital. We stayed in contact quite a bit during his hospital stay and he often sent me health updates via email. He emailed me one day telling me he was doing much better and was getting ready to go home. I was very happy for him, and hopeful he was going to survive this ordeal. He died just 10 days later. Needless to say that I, as well as his family, was in shock. But his family was more than relieved that someone experienced was going to take those cats because they did not have a clue of what to do with them. They were quite frightened of them actually. Those cats were the last thing they wanted to worry about at that time.

However, things don't always happen as you plan, even if you are very meticulous as David was. David tried his best to make sure everything was lined out and prepared for. I still agreed to take the lynx, I gave him my word, and I intended to stand by it. And of course, nothing like this ever happens when it is convenient. So, the person he had arranged to care for the lynx and transport them to me, refused to do it now. The family had no clue as how to care for the lynx and they wanted them out of the house they were in as quick as possible. The money that David put into an account for the lynxes travel expense mysteriously disappeared. The authorities were very helpful and did not have any problems with David's arrangements for the cats. In fact, his State G&F Officer called me about 2 weeks after the lynx got here to check on how they were doing.

I was in a bind time wise and could not go get the lynx right away, so I frantically tried to scramble around and figure out how to get the lynx. Thankfully quite a few LIOC members came through for me, and helped get them to me.

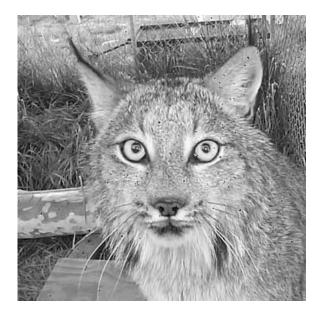
And so began what we dubbed "The Great Lynx Adventure". Carol Seigley drove from OH to PA to pick them up about 6-7 hours each way. She had quite a adventure when she arrived with a house full of David's family and friends trying to assist handling the cats, even though they had no experience. One of the lynx was quite uncooperative, and Carol had to wait on a vet to come out and sedate the cat so that it could be put in a carrier and loaded into the truck. She drove all night long back home. A few days later, Carol drove the cats to Bob Turner's in IN, where they stayed for the day. Mike and Tonya Jones of KY drove about 4 hours each way to Bob's and picked them up and took them to their place in KY, where the lynx spent the night. I rented a van and drove up to KY the following day and picked them up and finally brought them to their permanent home, after driving straight back home all night, a 14 hour round trip. They were really ready to settle in somewhere by then too. We were lucky in that David's vet was cooperative to go over to his house and prepare health certificates for their transport without much notice, and all the state authorities were very helpful in getting us all transport permits quickly by faxing them to us on the same day they were

requested. It seemed really frantic and crazy at the time, but everything fell into place and worked out fine. And I suppose if things seemed frantic and crazy to me, things must have been really scary for David's lynxes, Emony and Tobin.

Perhaps "The Great Lynx Adventure" was not what David had in mind for them, but we did the best we could on such short notice and without funds to assist in any way, and in the end, they arrived safe and sound where he wanted them to be, so I guess that is what counts. Emony and Tobin have settled into their new home and re doing quite well. Tobin especially is a real sweetheart. He loudly yells, "Woooo, Wooooo, Wooooooooo" hen he wants me to come visit with him. He seems to like all my family and friends, and wants everyone to give him a ear scratch. Emony is a bit more shy, and is not too sure about being friends with any humans. David had told me she was that way with him anyway, so I don't think she is behaving any differently then she did for him.

So my advice to other exotic cat owners is to find someone who is willing to make the commitment to your cats under any circumstances and to be prepared to take them with little or no notice. Try to line up everything the best you can to make it easier on any one involved in caring for your animals after your death and getting them to their new home. It is expensive to build animal cages, and if the new home doesn't happen to have an empty cage when something like this happens, that's a lot of money they have to come up with quickly without much notice to get things set up for your animal. Luckily, I had several empty cages when David passed away, so I was able to take his lynx in here without having to wait on a cage to be built. So take everything into consideration that a new home would need when taking in your animal. You should visit with people and possibly even visit their place to see what kind of home they would provide for your animal, so that you will feel confident your animals will be happy and well cared for after you are gone. I think it would be wise to name two places for the cats to go to. Name a main person to take the cats, but also a back up person if that first person cannot come through for whatever reason. People's financial and personal situations change, and more than likely when you pass on, it will not be a good time for that person to pay for a new cage to be built and take your cats in. Do not expect your relatives who love to visit your cats now to be willing to take on the burden, responsibility, and commitment to care for your cats after you are gone. Be sure to leave your written wishes on what will happen to the cats with people and in places where they will be found after you are gone. And hopefully, when you pass away, you can be at peace that your animals will be well cared for and continue to live happy lives.

I would like to send a special THANK YOU to Carol Seigley, Bob Turner, and Mike & Tonya Jones for helping me with the "Great Lynx Adventure". I could not have done it without you guys, Thanks so much!



Tobin, above, and Emony, right, David's beloved lynx



## Pyometra 199

The word "pyometra" is derived from Latin "pyo" meaning pus and "metra" meaning uterus. The pyometra is an abscessed, pus-filled infected uterus. Toxins and bacteria leak across the uterine walls and into the bloodstream causing life-threatening toxic effects, without treatment death is inevitable.

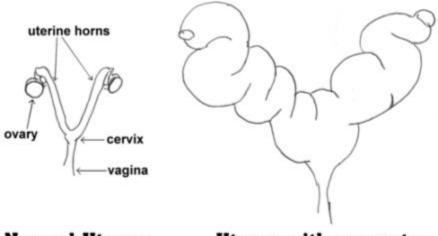
### What are the precursors to pyometra?

Classically, the patient is an older female dog. (Pyometra can occur in the cat but it's not nearly as common.) Usually, she has finished a heat cycle in the previous 1-2 months. She has a poor appetite and may be vomiting or drinking an excessive amount of water. In the more usual "open pyometra" the cervix is open and the purulent uterine contents is able to drip out thus a smelly vaginal discharge is usually apparent. There is also a form of pyometra called a "closed pyometra" where the cervix is closed. In these cases, there is no vaginal discharge and the clinical presentation is more difficult to diagnose. These patients also tend to be sicker than those with open pyometra due to retention of the toxic uterine contents. Lab work shows a pattern typical of widespread infection, which is often helpful in narrowing down the diagnosis. Radiographs may show a gigantic distended uterus though sometimes this is not obvious and ultrasound is needed to confirm the diagnosis. Other reasons are as follows:

Pyometra can be caused by many different things:

It can be promoted from secondary systemic bacterial infection, post copulation, cystic endometrial hyperplasia, from estrogen to treat vaginitis, post partum metritis or it can sponteously occur.

Below are illustrations of both a normal and pyometra-filled uterus.



Normal Uterus

Uterus with pyometra

### Is there an alternative to Surgery?

In the late 1980's another treatment protocol became available that might be able to spare a valuable animal's reproductive capacity. Here, special hormones called "prostaglandin's" are given as injections to cause the uterus to contract and expel its pus. The main prostaglandin's used is called (Lutalyse®). A week or so of hospitalization is necessary and some cramping discomfort is often experienced. The treatment takes place over the course of a week. This form of treatment is not an option in the event of a "closed" pyometra as described above.

PROS: There is a possibility of future pregnancy for the patient (though often there is too much uterine scarring). Surgery can be avoided in a patient with concurrent problems that pose extra anesthetic risk.

CONS: Pyometra can recur. The disease is resolved more slowly (over a week or so). There is a possibility of uterine rupture with the contractions. This would cause peritonitis and escalates the life-threatening nature of the disease. With each heat cycle, the uterine lining engorges in preparation for pregnancy. Infection can be activated by hormonal changes during this time. Eventually, some tissue engorgement becomes excessive or persistent (a condition called "cystic endometrial hyperplasia"). This lush glandular tissue is ripe for infection (the inside of the uterus is sterile, the vagina below is normally loaded with bacteria.). During estrus the cervix opens and bacteria is allowed to get in. Bacteria ascend from the vagina and the uterus becomes infected, also getting trapped as the cervix closes and ultimately pus filled. The warm and wet environment is perfect for the growing of the bacteria. E-coli and streptococcus are part of the normal bacteria in the vagina and are a frequent cause of bacterial pyometra.

There are some important statistics that you should know about this form of treatment:

- 1. The success rate for treating open-cervix pyometra is 75-90%.
- 2. The success rate for treating closed-cervix pyometra is 25-40%.
- 3. The rate of recurrence of the disease is 50-75%.
- 4. The chances of subsequent successful breeding are 50-75%.

### What is likely to happen if I do nothing?

The chance of successful treatment without surgery or prostaglandin treatment is extremely low. If treatment is not performed quickly, the toxic effects from the bacteria will be fatal. If the cervix is closed, it is also possible for the uterus to rupture, spilling the infection into the abdominal cavity. This will also be fatal.

## Article by Gary Fulgham and may not be copied, reproduced or reprinted without written authorization.

**Disclaimer:** Any medical advice given here is strictly the author's opinion, and is not intended as advice. It is not intended to diagnose or offer treatment for an individual animal. A qualified Veterinarian should be consulted for any medical condition.

## Importing: A Hairy Business

#### Submitted by Kevin Chambers

I have been importing and exporting for over 10 years now and I am frequently asked what it takes to import a cat. It is a very complex process, but it can basically be broken down into four segments: 1) locating and purchasing the cat 2) obtaining permits 3) arranging transport and 4) clearing US inspections.

We'll just assume that you've found a cat you want that can be legally exported and have it bought. Finding a supplier that you can trust is difficult and it could take another article on how to keep from being ripped off. Remember the supplier may be thousands of miles away from you and if he wants to keep your money, there is basically nothing you can do about it.

The first thing that must be done in obtaining the permits must be finding out the requirements from the exporting country and if any state or local permits are required from them in addition to the national permits. All cats are protected under CITIES (Convention on International Trade in Endangered Species, an international treaty) and require an export CITIES permit issued by the exporting country.

Once these permits have been applied for, the USA regulations must be checked. Some species of cats are going to require a CITIES import permit and/ or an Endangered Species Act import permit, depending on their offical classification. State and local agencies must be contacted to see if they require any import permits. The time it takes to get some of these permits can vary from a day to a year or more. You can never be sure just how long it will take and you should never be in a hurry. I have had some shipments take as long as two years before the cats actually got here from the time the deal was started. Another thing that may pop up is a transit permit required by any country that the cat may travel through in getting to the USA.

Once you have all the needed permits, it is on to the next step, arranging the transport. The most common mode of transport is commercial airlines, although some animals are driven from Canada or Mexico. Many hoops to jump through await you here. All wild cat species coming into the USA must first land on American soil at what US Fish & Wildlife Service calls a "designated port". There are about 10 airports with this designation and all have full time USF&W inspectors on duty. Another possible option is what USF&W calls "non-designated ports". This is another relatively short list of airports that USF&W may let you use by obtaining a special permit from them. In this case, you also have to pay for the travel of a USF&W inspector to that port because these ports do not have full time inspectors. When someone drives a cat back from Canada or Mexico, a non-designated port must be used.

So once you know where the cat must first land in the USA, you have to find an airlines that can get it from the foreign country to the US port, another major headache. Many airlines will not carry live animals or have temporary embargos. Other airlines simply do not have good connections and take entirely too long to get the cat here.

OK, here you are. You have a fist full of permits and have found an airlines that will carry the cat with routing that gets it to your designated port in the shortest time possible. You're getting close, but you aren't home free yet. You have to make sure that the crate the cat is shipped in meets IATA LAR requirements (International Air Traffic Association Live Animal Regulations). This is another long list of international requirements that regulate crate construction, ventilation, feeding and watering, labeling, etc. Your shipper can't just go buy a pet taxi and ship the cat in it without first modifying it and making sure it meets the IATA

requirements. Some species require specially constructed crates that are metal lined and have specific strength requirements. Individual airlines may have their own requirements in addition to those set forth by IATA. If your supplier doesn't meet the requirements, the airlines may not accept the shipment or once it arrives in the US, you may be fined by USF&W. That's right, if your shipper does something wrong, it is going to be YOU that is going to pay.

This all falls under the Lacey Act and the USF&W says that you are the one that made the shipment happen so you are responsible for what your shipper does. Fines can be as high as \$20,000. You also have to make sure that the shipper doesn't put any raw meat or hay in the crate. These are considered agricultural products and require permits from USDA even if they are being used for food and bedding. Depending on the country of origin, they may return the shipment back to the sender if there is someing in the crate that requires a permit and there isn't one or if it is banned from import from that country. Sometimes something as miniscule as if the wood the crate is made of contains bark on it will cause huge problems.

After the flight has been booked, you must pre-notify USF&W and submit copies of all permits and other documents that are required. They will arrange for an inspection time to inspect the shipment. When the big day comes and the cat arrives, they will inspect the cat, crate, and documents to see that everything is in order and then clear the shiment if everything is ok. USDA now also must sign off that the animal does not show signs of FMD (Foot and Mouth Disease).

I had a friend who recently had a shipment of fish held up because he did not have the USDA stamp saying that the fish were FMD free. It may be silly, but it is required. Public Health Services may also want to look at the cat and sign off on it, too.

Once all of these inspections are complete, you must get final clearance from US Customs service. Once Customs does this, the cat is free to go. If you are lucky, you live close enough to the arrival port to pick the cat up. If not you must arrange a flight to your airport. This can't be done before hand because you never know how long all of the inspections and clearances are going to take. Often times, you must make arrangements with a licensed holding facility to hold the cat overnight if a flight can't be booked the same day. The airlines cannot hold it for you and this is an additional cost. We won't even get into weather related embargos. You also have to arrange for a forwarding company to move the cat from one airlines to the holding facility or the other airlines.

As you can see, importing is a very complex process that can leave you sitting in the corner rocking back and forth mumbling to yourself. If ANY of the hoops are missed, it can cause a great deal of trouble because the activity is then considered smuggling. The best course of action is to hire an experienced importer to do the importing for you. It's not impossible to do yourself, but the time spent finding out all of the requirements and making arrangements can give you an ulcer.

An example is one time I had to get a letter from USDA addressed to the foreign country's veterinary service stating that no quarantine was necessary. Since the quarintine wasn't required, you would think that would be a piece of cake. Each office of USDA that I called confirmed that no quarantine was needed, but no one would put it in writing. Finally, the 19th office wrote me the letter.

To sum it all up, importing is a very expensive and time consuming affair. If it is done improperly and any one of the multitude of requirements is not met, the whole excitement of getting a new cat can turn into a night-mare.

## When it All Began

#### by Donna Verba

It all started on a warm summer afternoon. My husband was leaving the house with my daughter, when they spotted something in front of the truck. He slammed on the brakes, my daughter jumped out and snatched up this lost or abandoned baby. Well ,the baby was a wild born motherraised bobcat kitten, just old enough to be weaned. I was now the proud owner of my first. Yep, that's how it started. I didn't know then that this was the start of a whole new journey in my life. I must say, it has become one of the best things in my life.



Sherabie was the beginning of it all. She was wild born and mother-raised. The photo was taken shortly after we found her in our driveway.

Ignorant of how to care for this baby, I phoned Lynn and Bart for some information on the proper way to care for this kitten. Well, this journey was going farther now. Lynn came over right away to help me with the baby and give me a few things I would need to take proper care of her.

Now it's 9 years later and we're still going. I have taken in 4 rescue bobcats and a Canadian lynx. New cages are going up as I type this.

Yes, we are making room for more who are soon to be homeless, or in need of help.

I have learned a lot from Lynn and Bart over the years, and have been given the honor of caring for all their animals when they are called away. Throughout the years, I have been given the privilege of caring for baby cougars, servals, and caracals and, of course, bobcat babies. I guess I have learned in these past years so that I can be trusted with the lives of these very precious babies when the need for help arises. I feel honored to be called on to care for the grown cats too. On many occasions I have been the caretaker for the whole crew out there. To be trusted with the lives and health of these animals is a very big responsibility.

For those of you with cats, it is very important that you have a friend you can trust with the care and feeding of your animals if the need every arises. Someone who has some knowledge of how to handle your cats, and who is a safe and reliable individual. To take on the care of your cats is a big responsibility and should be given only to someone you can trust. This is even more important if you have large cats. You need a trustworthy person to be there for the animals when you are called away, someone who knows not to give in to the temptation to stick their hand in the cage to pet the cougar or tiger, or even the small

cats the size of the Geoffrey's.

I have cared for cougars to Geoffrey's, they all have their own disposition. A caretaker needs to be familiar with the animals and their behavior. This is for the safety of the animals and the caregiver. If you have or are thinking of having any of these magnificent creatures, then give serious thought to who will be caring for your very precious animal when you are called away.

Nine years later I still consider myself a novice, and I am learning from all the mentors out there who are still teaching and giving of themselves for the sake of the animals.

Bobbie, my ham!



Bobbie, my newest wildborn rescue. She loves her plant!





Tagi is my poor abused toothless rescue. After many months of slow introduction, Tagi and Bobbie are the best of buddies. It took over two years of patience, but Tagi will now take food from my hand, and I have even been able to sneak in a quick pet on the backside when he's not looking.

Phoeebee has been a challenge, but in time she will come around. She was not abused-she had a good home--but due to a job relocation she came here. She enjoys her new cage.





## Farewell to Buzz July 9, 2002

#### by Lynn Culver

Buzz, our cherished breeder male bobcat was put to rest this morning after complete bloodwork confirmed that he was in end stages of renal failure. It was an emotional experience for us both, as Buzz is truly a one-in-a-million bobcat. He will be greatly missed by us as well as by his four ladies. He sired many beautiful bobcat kittens for us this the past five years and the world is a better place because of him.

I first met Buzz at a private facility in

Oklahoma. He and 9 other bobcats lived in rather tight quarters, under the broiling sun with only a tipped over, black 55 gallon drum for shade and weather protection. An elevated platform made of stretched chain link in the corner of their cage reminded me of photos I had seen of concentration camps during World War II. It wasn't barbed wire, but chain link, how comfortable was that? The owner was going out of business, and I purchased Buzz and two females that we named Baby and Bobette.

Buzz was a beautifully spotted male, with a very mellow personality. He had cauliflower ears, probably a defect from either rear mites or cat fights sometime previous. I had a choice between him and another male, who was cosmetically perfect, but chose Buzz for his wonderful personality.

Buzz and his females shared a 1500 square foot, triple cage complex, with several wooden climbing towers, partially covered wooden roof, numerous flowering bushes and a healthy stand of china bamboo established inside the cages for shade. We introduced two other females to Buzz, named Dolly and Bella. He was a charmer. All his ladies affectionately greeted him when he was rotated their way, especially Bella. He was a gentle breeder and enjoyed human attention and would stand by the cage wall and purr for caresses.

The discovery of Buzz in such a debilitated state was a shock to us. Sunday evening he met us at the feeding station and was obviously very dehydrated and thin. He cooperated by voluntarily walking into an examination cage so that we could remove him for sedation and rehydration. I administer 700 mls of lactated ringers solution and a shot of amoxicillin and a shot of B vitamin complex. The next day he ate a few small pieces of chicken for dinner. We scheduled a trip to the veterinarian for Tuesday morning to help determine

what course his treatment should take.

I had a very bad feeling about him, and suspected cancer, as I couldn't imagine how an animal could loose so much weight while eating daily. The veterinarian's blood testing equipment only went up to 130 on BUN detection and Buzz's results were in excess of that. His creatinine was 6.4, with normal more in the range of 1 to 2. These two test results painted a picture of both acute and chronic kidney failure. Such extreme results coupled with his diminished body mass told me that heroic measures to save him would not be in his best interest.

We are saddened by his passing. I do not know Buzz's true age, he lived with us for just 6 years, and could have been anywhere from 11 to 20 years of age. I witnessed him breeding just a month ago and can't believe he is now resting in our feline cemetery.

Buzz has many offspring dispersed throughout North America and abroad. Survivors at our facility include his four ladies, Bella, Bobette, Baby and Dolly, his daughters Muffin and Mariah and his son Fuzzy Woo. We have another of his male offspring from this spring's kittens we have now decided to keep--we have named him Little Buzz in memory of his father. He has some big paws to fill, but he is on the right track. Little Buzz is a loving, affectionate and beautiful little boy. 14



Above: Bart with Little Buzz. son of N.O.A.H. Feline Conservation Center's patriarch bobcat, Buzz. Top: Buzz breeding with Dolly

## Anesthesia & Pain Control

There are a large number of veterinary procedures performed on cats, dogs and other pets which require anesthesia or sedation. Almost every pet will need to be anesthetized sometime during its life. All pets who are spayed or neutered will require anesthesia. For some animals, a simple nail trim will require that they be sedated for a short time if an all-out war is to be avoided. For others who undergo certain surgeries such as a fracture repair, hours of anesthesia may be necessary.

Anesthesia for small animals has improved dramatically over the last few years, with new medications, monitoring devices, and the implementation of routine pre-anesthesia screening. Fewer complications and faster recoveries are now the norm. Pain control has now become an important part of many therapies and procedures. The following will explain, in more depth, how anesthesia is used and monitored in a typical veterinary hospital.

#### Anesthesia Machines & Systems

The primary purpose of the anesthetic machine and system is to deliver an inhaled (gas) anesthetic to the animal to keep him unconscious through surgery. There are two basic types of anesthetic systems used for small animals: rebreathing and non-rebreathing.

Rebreathing systems are used for animals weighing over 10 pounds. A rebreathing system allows recirculation of exhaled gases back to the animal. Each breath contains exhaled gas that has had the carbon dioxide removed and fresh oxygen and anesthetic added.

The nonrebreathing system is used for those animals that are typically under about 10 pounds. These smaller animals need a higher flow of gases to prevent reabsorbtion of carbon dioxide. In this type of system, little or no exhaled gases are returned to the animal, but exit through the popoff valve into the scavenger hose. A nonrebreathing system is usually not used in the larger pets since the high gas flow wastes oxygen and anesthetic. High flow rates also lead to heat and fluid loss from the pet. Heated and humidified exhaled gases are replaced in the respiratory system by an inspired gas mixture that is cool and dry.

The two types of systems each have their advantages and disadvantages that are taken into account by the veterinarian when he or she decides which system to use for each individual animal.

#### Advantages of Rebreathing Systems

- . Less oxygen and anesthetic gases are used because of the lower flow rates
- . Less waste gases are produced
- . The animal's heat and moisture from respirations are conserved

#### Advantages of Nonrebreathing Systems

- . Depth of anesthesia can be changed more rapidly
- . Less resistance occurs during respirations (small animals may have difficulty inhaling with enough force to draw air through a rebreathing system.)

#### Monitoring the Anesthetized Animal

Various techniques are used to monitor the animal's vital signs during anesthesia and through recovery. A skilled technician is able to use his or her senses of touch, hearing, and sight to monitor an animal. Electronic devices are also used.

The heart rate and rhythm may be monitored by directly feeling the chest wall, listening with a regular stethoscope or an esophageal stethoscope, or by using an electrocardiogram (EKG, ECG). An esophageal stethoscope is an inexpensive tool that consists of a tube placed through the mouth and down the esophagus to the level of the heart. This special tube can be attached to a device that amplifies the sound of the heart that is then

transmitted through the speaker on the device. An EKG measures the electric currents generated by the heart. It is used to monitor the heart rate, rhythm and changes in the nerve impulses in the heart. Continuous monitoring with an EKG allows early recognition of electrical changes associated with disorders of conduction in the heart and arrhythmias that may need to be treated.

The passage of blood through the vessels of an organ is called tissue perfusion. Several methods may be used to monitor tissue perfusion. The pulse may be palpated in the animal (just like you take your own pulse at your wrist or neck) and, with practice, be characterized as strong or weak. Using the strength of the pulse along with monitoring the color of the gums and internal organs during surgery will help tell the anesthetist how well the blood is getting to the tissues.

The capillary refill time (CRT) measures the rate of return of color to a mucous membrane such as the gum after the application of gentle pressure. It's the same as if you take a finger and press it against another and release: the skin goes pale for a second and then the normal color returns as the blood returns. With good tissue perfusion, the CRT is typically about 1 second.

Taking the animal's blood pressure during surgery will also help determine tissue perfusion as well as depth of anesthesia. If the pet is in a light surgical plane (under light anesthesia), he may have an increase in blood pressure when the surgeon starts the surgery or manipulates the tissues. The surgeon also monitors the blood loss that is occurring during the procedure since that also impacts tissue perfusion.

Pulse oximetry is a way to estimate how much oxygen is being carried by the blood. In humans, a sensory clip is placed on a person's finger and via photoelectronic means the oxygenation of the blood can be determined. In animals, the sensory probe needs to be placed on the pet's pink, non-pigmented tongue. Examining the color of the mucus membranes also helps assess oxygenation. The membranes should be pink.

The respiratory system can be monitored by watching the chest wall and counting the number of breaths taken per minute and by watching the movement of the reservoir bag on the gas anesthetic machine. The breathing should be smooth and regular.

The body temperature falls during anesthesia due to the effect of the anesthesia and procedures associated with the surgery. Prior to surgery, enough hair is shaved to clear the area of the surgery. The skin is washed with antiseptic and alcohol solutions, often resulting in heat loss from the animal. Internal organs may be exposed to the room air during surgery, further decreasing the animal's temperature. The animal cannot replace the lost heat through shivering or muscle movement due to the anesthesia. The temperature should be monitored throughout surgery and continued until it is back to normal after surgery.

Several methods are available to help decrease heat loss. They include using warm IV (intravenous) fluids, placing the animal on pads containing circulating warm water, using hot water bottles, and placing padding between the animal and the metal surgery table. As the anesthesia wears off, the animal can start to shiver. Shivering during recovery is normal as the body re-regulates its temperature.

The vital signs can be a clue as to how deeply the animal is anesthetized. The anesthetist will also monitor other parts of the animal's body during the surgery. The amount of muscle relaxation, different reflexes, and pupil position will all help determine the depth of anesthesia.

Anesthesia monitoring is not a simple process. It requires training and experience. Correct monitoring will help make sure that any complications that occur are detected and treated early so the outcome is a healthy pet and happy owner.

#### **Stages of Anesthesia**

General anesthesia is attained in stages. The success of the anesthesia depends on all the stages being reached correctly.

Stage 1: Preparation (premedication)

Several types of premedications are given prior to administering the general anesthetic. The animal is given a tranquilizer or a sedative to help relax him for the procedure. A sedative decreases excitement and causes relaxation and reduced mental activity. Some sedatives such as Xylazine, also provide pain relief. A tranquilizer is a drug that calms an anxious human or animal. Tranquilizers do not provide any analgesia (pain relief). Tranquilizers include diazepam, midazolam, and acepromazine . Tranquilizers and sedatives may be used singly or in various combinations. Combining medications can minimize side effects because less of each medication is used.

A medication such as atropine or glycopyrrolate may also be used as a preanesthetic to help maintain the heart rate during anesthesia and to decrease the amount of saliva produced. Pain medication such as morphine or butorphanol may also be given at this stage to help make for a smoother, less painful recovery.

An intravenous catheter is placed in the vein through which injectable anesthetics and fluids may be given. The catheter is also available in case emergency drugs need to be administered.

#### Stage 2: Induction of anesthesia

Usually an injectable anesthetic is given to place the animal in an unconscious state. Once the animal is unconscious, an endotracheal tube is placed in the pet's trachea (windpipe) to allow for oxygen and gas anesthetic to be given. In animals that do not receive injectable anesthetic agents, the inhalant (gas) anesthesia may be given via a mask over the face to bring them to an unconscious state. At that point, an endotracheal tube would be inserted.

#### Stage 3: Maintenance of anesthesia

This is the stage where surgery is performed. The animal is kept unconscious and pain-free. Inhalant anesthesia offers more precise control of the level of anesthesia than do injectable forms. Examples of inhalant anesthetics are isoflurane and halothane. The anesthetist monitors the animal's vital signs including heart rate and rhythm, breathing rate, oxygenation of the tissue, and body temperature.

#### Stage 4: Recovery

A good recovery is one that is uneventful. During this time, the animal's vital signs should still be monitored until the pet is fully awake and able to stand. Recovery is easiest on the pet if it occurs in a warm, quiet environment. The animal should be able to awaken slowly and quietly. During this stage, vomiting or urinating may occur. Shivering is normal in the early stage of recovery as the body's temperature regulation returns to normal.

Rate of recovery: Individuals have different rates at which they recover from anesthesia depending on health, length of anesthesia, and type of anesthetic used. For short procedures such as a routine dental cleaning, animals are typically awake and ready to go home within 4-8 hours after the procedure. Other longer surgeries, such as a complicated fracture repair that require several hours of surgery, will require a longer time-frame for recovery.

Post-operative pain management: Managing post-operative pain has become an important aspect to be considered during the recovery period and beyond. In general it is best to give pain relief medication before or during surgery so it is already working as the animal is waking up. Depending upon the surgical procedure, pain medication may be continued for several days post-surgery.

Giving food and water: Once the pet is able to stand and walk, very small amounts of food and water can usually be offered every several hours. Some pets are nauseous after anesthesia, especially if they were anesthetized for a long period of time, and may not want to eat or drink for several hours or overnight. If fluids have been given during the surgery, the fast should not harm the pet. If the pet has been released from the hospital and will not eat the day after the procedure, the veterinarian should be notified in case follow-up care is required.

Anesthesia is not entirely without risk, but it is an invaluable tool that is used in veterinary and human medicine.

The risks can be minimized if proper advanced planning is done when possible and each stage of anesthesia is reached correctly. Today's anesthetics can be individualized for each animal's needs and veterinarians are highly trained in their use.

#### Anesthetics - Sedatives - Tranquilizers

Anesthetics and sedatives can be divided into several broad categories depending on how they function.

#### Local anesthetics

Local anesthesia provides pain control for a specific location on the body. Examples include an epidural before surgery on a rear limb or a nerve block before a tooth extraction. The local anesthetic prevents the pain impulse from being 'read' by the brain. With animals, local anesthetics may provide pain control, but may not be sufficient to keep the animal still during the procedure. In these cases, a sedative or general anesthetic is typically needed in conjunction with a local anesthetic. For certain procedures, local anesthetics may be used in an effort to decrease the amount of general anesthetic needed and speed up recovery time.

Lidocaine is an example of a local anesthetic. It lasts about 1-2 hours. Lidocaine should be used with caution in animals with certain heart conditions or liver disease. It is used with caution in cats since cats tend to be more sensitive to it than dogs. Bupivacaine is similar to lidocaine and lasts for 2-6 hours. Morphine may be combined with a local anesthetic for epidurals.

#### Sedatives and tranquilizers

Sedatives and tranquilizers are used to relax an animal for procedures such as trimming nails, taking x-rays, or drawing blood. These medications are injected either into a muscle or directly into a vein. Sedatives and tranquilizers are commonly used in combinations as preanesthetics before general anesthesia to relax and sedate the animal.

Diazepam (Valium) and midazolam are tranquilizers that are used to relax animals before surgery. They should not be used in pregnant animals since they could cause birth defects. Acepromazine is another tranquilizer used as a preanesthetic. It should not be used in animals that have seizures since it may increase the risk of the animal having a seizure. It may also cause hypotension (low blood pressure). Tranquilizers do not provide analgesia (pain relief).

With any of these medications, the animal may be groggy for the remainder of the day but should be able to stand and walk before he is allowed to go home.

#### Sedative - analgesics

Some sedatives also provide analgesia (pain relief). Among these are several short-acting drugs which have reversal agents that quickly bring an animal back to an alert state. An example is Domitor (medetomidine hydrochloride), which is used as a sedative and analgesic in dogs. It is used for minor procedures that do not require muscle relaxation such as the removal of porcupine quills. The medication is given IV (intravenous) or IM (intramuscular ), and the animal is allowed to quietly rest for 5-10 minutes while the drug takes effect. Twitching is a common side effect. Once the procedure is done, the animal is given atipamezole hydrochloride (Antisedan) to reverse Domitor's effects. It is given IM and the animal is awake in 5-10 minutes. The pet may have an abrupt reversal of the sedation and become startled. A quiet, darkened area would be the ideal setting for allowing the animal to rest during the reversal process.

#### **General anesthetics**

General anesthetics are used when an animal needs to be unconscious and unaware of what is being done for an extended period of time, such as for surgery. General anesthetics block the pain sensation, prevent movement during surgery, and usually cause muscle relaxation. Thiopental is an ultra-short acting barbiturate that is used for induction of general anesthesia or for very short procedures such as suturing a small wound or removing porcupine quills. It is injected directly into the vein and unconsciousness occurs within a minute.

Ketamine is a common injectable anesthetic used for restraint or short procedures, such as draining an abscess. Typically it is safer used in combination with other drugs. Ketamine is used in cats; it provides no muscle relaxation. Ketamine functions differently than most other injectable anesthetics. It produces 'dissociative' anesthesia, which means the animal is not aware of what is going on. The animal's eyes remain open and reflexes are generally present.

When using a general gas anesthetic, the animal is given an induction agent such as thiopental to bring him to unconsciousness. Then the gas anesthetic is mixed with oxygen in the anesthesia machine and is administered via a face mask or an endotracheal tube placed in the pet's trachea (windpipe). Commonly used general gas anesthetics include, isoflurane and halothane. They are both rapidly taken up and eliminated from the body by the lungs. Isoflurane has become the anesthetic of choice in veterinary medicine, and its use is especially indicated for pregnant animals (including c-sections) and for animals with heart problems.

These are a few of the medications available to veterinarians for use during restraint, minor procedures and general anesthesia. Sometimes the medications are used alone while other times they are used in combinations. Each animal receives the type and amount of medication best suited for his individual needs.

#### How Anesthetic Gases Work

An anesthesia machine mixes the anesthetic gas, such as halothane or isoflurane, with oxygen and delivers it to the animal. This combination is breathed in by the animal through the endotracheal tube that has been placed in the trachea (windpipe). The anesthetic gas moves down the branches of the lungs until it reaches the microscopic alveolar sacs. The gas transfers from the alveolar sacs to the bloodstream. It then travels in the blood to receptors in the brain where it causes the state of anesthesia.

As the amount of anesthetic is decreased, either to lessen the anesthetic depth during surgery or to waken the animal after surgery, the process reverses. The gas travels from the receptor site into the bloodstream, passes into the alveolar sacs, and is breathed out of the lungs when the patient exhales.

The depth of anesthesia can be changed quickly during surgery as needed by increasing or decreasing the percent of anesthetic gas that mixes with the oxygen.

#### **Preanesthetic Planning & Screening Tests**

Before your pet undergoes a procedure that requires sedation or anesthesia, it is ideal for him to have a complete physical examination by a veterinarian to determine his overall health. The veterinarian may also recommend blood tests such as a CBC and chemistry panels to check the health of some of the internal organs such as the kidney and liver. Some types of anesthesia are eliminated from the body through these organs. An EKG of the heart may be performed to make sure it is beating in a normal electrical rhythm. If a potential problem is uncovered during any of these exams or tests, it may indicate that an elective procedure should wait until the problem is solved or may indicate the need to use a different form of anesthesia or monitoring than was planned. These tests also help predict the length and smoothness of recovery from the anesthesia and surgery. If your pet has had anesthesia previously, it is helpful for the veterinarian to know how the animal responded to the anesthesia and what type of anesthesia was used. This is especially important if the animal had difficulties during the anesthesia or recovery since other anesthetics could be used instead. Preanesthetic screening tests help to make anesthesia as safe for your pet as possible.

#### Fasting from food and water

A pet is typically fasted from food for 6-12 hours before anesthesia and from water for several hours. This allows

the stomach time to empty which helps prevent vomiting and aspiration of the vomitus into the lungs. The length of time without food and water varies depending on the pet's age and health. An eight week-old kitten will have food withheld for a shorter time than an adult cat since the pediatric pet does not have as much energy stored as an adult cat. An older animal may not have water withheld as long because of kidney disease.

To increase the safety of the anesthesia, especially during longer procedures, intravenous (IV) fluids are given. The fluids received by the animal will help maintain a healthy blood pressure and protect the kidneys from dehydration. The catheter used to give these fluids also provides easy access to the circulatory system in case of an emergency.

#### Antibiotics

Antibiotics may be started a day or two in advance of procedures such as dental cleanings. If the oral health of the pet is very poor, pre-surgical antibiotics may help prevent the spread of infection through the body that may occur due to bleeding during the cleaning and extraction of infected teeth. If antibiotics are prescribed before or after a procedure, they should be given according to the instructions. If a reaction occurs such as vomiting or diarrhea, contact your veterinarian since another antibiotic may need to be substituted.

Planning ahead for elective procedures helps to reduce the risks associated with anesthesia. Remember, anesthesia is necessary at times, and is safer now than ever before.

Jennifer Prince, DVM

Submitted and Edited by: Tracy Wilson

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## Blood transfusion for cheetah

submitted by Colette Griffiths

Pretoria - A young North West cheetah, suffering from a ruptured stomach ulcer, owes his life to a cheetah

from the Pretoria Zoo who donated 600ml blood for a transfusion.

A cheetah, aged between one and two years, of the De Wildt Cheetah and Wildlife Trust near Hartbeespoortdam, was taken to the Onderstepoort Veterinary Hospital in Pretoria on Tuesday night in serious condition.

He was suffering from severe abdominal pain, a distended abdomen and had collapsed due to circulatory shock.

The cheetah was stabilised with intravenous fluids while veterinary staff performed a clinical examination and diagnostic imaging.

It was then decided that the abdomen should be surgically opened and veterinarians discovered a large ruptured stomach ulcer.

The cheetah had a very blow blood protein concentration and needed plasma urgently. A veterinarian from the National Zoological Gardens of SA in Pretoria, who attended the examination, then suggested that one of the zoo's cheetahs donate the blood.

A spokesperson for the zoo, Angeline Cloete, said the national director was contacted and he gave

permission for the procedure to go ahead.

A team proceeded to the zoo where a cheetah was immobilised and 600ml of blood was drawn.

The blood was rushed back to Onderstepoort where the sick cheetah received a transfusion during a two-hour operation.

Cloete said he stayed in the intensive care unit on Tuesday night and his prognosis was positive on

Wednesday.

From: http://www.news24.com/News24/South\_Africa/NorthWest/0,1113,2-7-835\_1192012,00.html



N.O.A.H. Feline Conservation Center proudly breeds Bobcat, Serval, Geoffroy's Cat and Canadian lynx. Accepting deposits for kittens due this spring. Contact Lynn or Bart Culver at 501-394-5235 for more info. USDA license # 71-B-0116



# Glucosamine Spells Relief

#### Submitted by Tracy Wilson

Here's a nifty website I thought I would share with you all. It is really more about arthritis and glucosamine use in domestic dogs and cats, but I know many of us have used glucosamine for our older exotic cats. It really works, and has made many an old cat a lot more comfortable in their old age. So, it is an interesting read, and you can take this info and apply it to your wild felines.

I have an elderly dog whose joints had gotten so stiff that she could only move very slowly. She could not get up and down my stairs, and could not really run. She was really pathethic and slow. I put her on a glucosamine product (Arthrimix), and a few months later, she is running and frolicking outside again, and has been very frisky. It is unbelievable that this is the same dog. I have been really pleased with it.

So, if you have an old cat that seems to be stiff or have arthritis, you might want to read through the above website, and try out some glucosamine products on your cat. It usually takes a month or more for you to be able to see a difference, so you have to be patient.

The web site is at: http://www.arthritis-glucosamine.net/pet-arthritis/



Tracy Wilson with some of her agile lynx





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### Host a LIOC Wild Feline Husbandry Course in Your Area!

As Director of Education for LIOC, I really would like to see more husbandry courses held throughout the year in various locations. We like to spread out the locations that each class is held, to better accommodate students who wish to attend but cannot travel far distances. I would like to go over the basics of what is involved in hosting a husbandry course in your area.

A Husbandry Course Host is the point of contact for the students and instructors. Typically there are not a lot of upfront out of pocket expenses for the Host. The Host is responsible for collecting the student registration fees, and all of the class expenses are paid out of those registration fees. Basically, a Host's job is to organize and coordinate everything for the class. The responsibilities of the host are to reserve or provide a building for the class, rent or provide the equipment needed (overhead projector and screen, tables, chairs, etc), get the classroom set up properly, collect registration fees, be the point of contact for the students and provide hotel info and directions, make arrangements to get the instructors to and from the airport and their hotel arrangements, advertising, etc. Of course, the instructors will help advise and answer any questions the host may have about any of these responsibilities.

What we typically do when setting up a new class, is set a registration deadline for about 35 days from the class date. Once we reach the registration deadline, we see how many people have registered by that point. The instructors will get quotes on airfare and estimate all their expenses, (we do not charge for teaching the class just reimbursement for traveling and supplies). We also estimate all other expenses such as student materials, and any costs that the host may have, and we see if we have enough registration fees collected at that time to cover the instructors traveling costs, student supplies, and the hosts expenses. If we do not, we will cancel the class at that point, and the host is responsible for returning registrations already paid. Typically we need at least 25 students to cover all our costs. But that varies with each class because of location, airfare, various expenses, etc. We do have a contract for the host to sign that lists the the hosts obligations and covers the financial aspect of it as well.

Usually the only up front expense the host has, is for advertising. We ask that the class is advertised in Animal Finder's Guide, as it reaches a large targeted market and has proven to attract many students to the class in the past. If the class is canceled at the registration deadline, the Host would have to take the loss of advertising costs. If the class is not canceled, the advertising cost will be taken out of the registration fees and reimbursed to the host. We will also advertise the husbandry course for you for free in LIOC's newsletter, and I typically post it on many internet boards and email lists for you as well. Some hosts have printed up flyers and posted around their communities and have received good responses also.

As far as the classroom is concerned, we just need tables and chairs for the students, a overhead projector and screen, microphone and stand/podium if it is a large room. We typically do not like the class size to get over 50, so a classroom that could accommodate up to 50 students is ideal. Most hosts have been able to get churches or other community type buildings donated at no cost for the class. Just make sure it is in a quiet and private area as the class is quite intensive. If the Host has to rent a room at a facility or hotel, and a deposit is required on the room, if the class is canceled at the 35 day mark, the host will be responsible for the room deposit and take the loss of the deposit.

We need to schedule a class as far in advance as possible, at least 3 months ahead of time minimum, to give students enough time to get registered and all the details ironed out for the class. Please contact me, Tracy Wilson, if you are interested in hosting a class.

#### **Basic Wild Feline Husbandry Course**

Developed and Provided by LIOC Endangered Species Conservation Federation

This course was professionally developed in accordance with a nationally recognized standard for technical training known as the Systematic Approach to Training (SAT). The course includes an instructor lead, multi-media presentation, a 60 page student text, workshops, and final exam. Students who pass the exam receive a decorative certificate denoting successful completion of the course.

Cost per student is \$75.

The class is geared towards novices, but is a great refresher for "old hands" also. It is also extremely helpful for those who are interested in becoming USDA licensed. **Topics Covered Include:** 

Natural History of Wild Felines, Regulatory Agencies & Permits, Facility Design, Handling Equipment, Diet/Nutrition, Health Care Basics, Disposition & Handling, Behavior Conditioning, Contingency Planning

Tracy Wilson, Director of Education and Conservation Email: education@lioc.org Phone: 501-368-0399

### Neonate Felid Care-A Beginner's Overview

Submitted by Bobby Bean

This is a compilation from contrinutors at the EFBC-Feline Conservation Center in Rosamond, California, Hexagon Farm, Wild Feline Breeding Facility in San Juan Bautista, California Mountain View Breeding & Conservation Center in Langley B.C., Canada, and Robert Bean of the International Zoological Research and Exchange in Knoxville, Tennessee, done for the AZA felid TAG. This is intended as an overview, not a detailed guide to hand rearing kittens. This group of authors advocates for allowing kittens to remain on the dam for rearing when possible.

#### **BOTTLE-RAISING NEONATE FELIDS**

The first week of a kitten's lifetime, we usually feed every 2-3 hrs. around the clock. The second week we might allow 4 hrs. through the night, then every 3 hrs. during the day. Here is some information accumulated (compilation) by some of the most experienced people in the world at bottle raising neonates.

#### **VOLUME OF FORMULA FED**

There is a tendency to overfeed baby kittens, especially species of small cats. It is very important to understand that in this case, too much is NOT a good thing! It is better to feed less, more frequently than more, less frequently. This is just one of the ways to lower the risk of aspiration. Aspiration pneumonia is one of the major causes of death of neonate felids.

A general rule of thumb is to limit the kitten's total daily consumption to no more than 30% of its total body weight. To arrive at this percentage, calculate the total amount fed and divide by the kitten's weight.

Example: If the cub weighs 400 grams and consumed 72 cc, 72 divided by 400 would equal 18%.

28.35 grams = 1 ounce 1 oz = 33 cc 453.59 grams = 1 pound

#### DIARRHEA

Diarrhea is a common occurrence, usually experienced early on when hand-raising baby felids. Any formulas fed are entirely different from the dam's milk and hence the kitten's system needs to adjust. Although diarrhea can be caused by parasites, the onset of diarrhea in neonates generally occurs because of: 1) adjusting to the formula for the first time, 2) a change in the composition of the formulas, or (3) bacterial infection.

Diarrhea is identified as the stool being watery with mucus and sometimes blood present. The normal milk-fed kitten's stool is soft and loose but is not diarrhea. When adjusting a formula's ingredients or adding ingredients such as a liquid calcium supplement or liquid vitamins, always make any changes slowly and always make notations. A kitten's system is still quite sensitive to any changes and these notations will allow you to go back and identify what changes were made to the formula that may have caused the diarrhea. You can then revert to the pre-diarrhea formula if necessary.

After the kitten has stabilized you can gradually add supplements again. In the past it was normal for individuals hand raising young exotic felids to immediately administer anti-diarrheic medications such as Pepto-Bismol (see note) or other liquid medicines to treat the kittens. Unless the diarrhea is accompanied by significant blood in the stool, today's zoo veterinarians feel a different approach is more beneficial. When kittens experience diarrhea, the preferred choice of action is to let it run its course and: (1) insure there is sufficient intake of fluids to prevent dehydration, (2) culture the stool, (3) monitor the kitten and await the culture results. If the results of the culture come back negative, chances are by that time the kitten's stool has returned to normal and all is well. If the results of the culture show an infection has caused the diarrhea, the veterinarian will prescribe the appropriate antibiotic with directions for administration along any other therapy that may be required.

**\*NOTE:** The use of Pepto-Bismol is NOT recommended for use in kittens, especially if there is any indication of blood in the stool. Salicylate (salicylic acid, the same as asprin) is an ingredient of the product and this can be absorbed through the walls of the stomach, especially one that is bleeding, and cause a thinning of the blood along with possible internal hemorrhaging **and even death**.