



Feline Conservation Federation

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The FCF supports conservation of wild felids by advocating for qualified individuals to own and to pursue husbandry of wild felines, providing expertise and material support to ensure the continued welfare and viability of these populations, contributing to research, and funding protection programs that benefit felids living in nature. Send \$35 annual dues (\$40 Canada, \$50 international) to FCF, 141 Polk Road 664, Mena, AR 71953.

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The FCF is a non-profit (Federal ID#59-2048618), non-commercial society devoted to the welfare and conservation of exotic felines. The FCF publishes the *Journal* quarterly.

Members are encouraged to donate older copies of the *Journal*, with permission of the resident, to vet offices, dental or medical waiting rooms, or public libraries or public officials, to increase awareness of the FCF, its members, and mission.

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Submit articles on husbandry, conservation, current events, editorials, and photos for publication to the managing editor, Lynn Culver, at lynnculver57@gmail.com.



Feline Conservation Federation

Letter From the President

The time for the conference is approaching quickly, with an early conference date in June this year – June 14th-15th. Don't miss out; sign up today!

The Turtle Back Zoo will host our event on the zoo grounds, and they have planned some exceptional opportunities for us when we visit. We are also offering the Wild Feline Husbandry Course and the Contingency Planning Resources Course. Our guest speakers this year will be our federal lobbyist, Bill Hanka, and the state lobbyist for the ZAA, Alan Smith.

Registration is open right up until the first day of the conference, but the early bird price increases on June 1st.

Legislative issues are very important to our membership. We are carefully monitoring the progress of the federal Big Cat Public Safety Act, and will be discussing our work in D.C., and our concerns about this bill in more detail at the conference.

While we as an organization cannot address every state issue, ones that broadly attack wildcat ownership can have a substantial impact on our members. A bill introduced in Texas that would have been

devastating to ownership will not pass this session. In North Carolina, several bills were introduced to restrict ownership of big cats, and at least one is likely to pass. North Carolina's H577 would prohibit ownership of big cats and other species outside of businesses licensed by or registered with the USDA, ensuring some oversight by trained officials. Bills in other states, like in Nevada, continue to attempt to further restrict ownership of certain species of wild cats, and bear watching. Fortunately, the folks in Nevada successfully stopped passage in their state as well.

In part as a response to her own legislator's lack of factual education on the ownership of exotic species, long time FCF member Elizabeth Felton is now running for U.S. Congress. Elizabeth spent years training with other owners, and then got a pet serval of her own. That passion for wildlife evolved into Safari Bob's, a USDA-licensed mobile program that engages and inspires thousands of children in the area of Palm Beach, Florida. Elizabeth also serves on the board of

another wildlife facility. While she certainly has a special interest in the ownership of exotic animals, she also presents a well-rounded platform as a candidate for office. We wish her success!

Please remember to vote on the two important constitutional amendments. One is regarding changing our name to the Feline Conservation Foundation, and was covered in depth in the last issue of this *Journal*. The other involves adding a new type of Novice membership that comes with a reduced price, no voting rights, and limited benefits. Voting has already begun, and concludes on June 5th. Voting is online at www.ElectionRunner.com. Members should have received an invitation to vote via email. If you did not receive your invitation or if you are not able to vote online, please contact me so we can ensure your needs are met.

I hope to see you all in New Jersey in June!

Mindy Stinner

Summary of Board Meetings in March/April 2019

Via conference calls and email, the board of directors met from March 1, through April 2, 2019.

Continued items of discussion were the revision of the website and updating our membership program.

Website - Current website is outdated, with many components no longer needed, others not working properly. Updating and keeping all current features is expensive. Giving a facelift is cheaper, but we would lose features we wish to keep, such as interactive forms. Various bids were acquired and options discussed. A motion was made by Brian Braitsch, seconded by Mindy Stinner, to engage CodeNinja and accepted unanimously a WordPress development company, which allows us to keep many of the interactive forms we need, the archived newsletters and *Journals*, and to make minor changes ourselves.

A decision to drop two domain names acquired by an earlier board and never developed or used was made to save cost.

A discussion to propose a motion to change Constitutional Article III to

include a category of membership called "Novice Membership" was made by Brian Braitsch, seconded by Dawn Strasser, and accepted unanimously. A novice member is to be any person with a sincere interest in any species of wild feline and shall not receive a printed *Journal*, be eligible to vote, or dictate policy, but will have access to other member benefits. Since proposal, letters to the effect of this motion were received by the secretary from Brian Braitsch, Dawn Strasser, and Mindy Stinner as required by the constitution, to place before FCF membership for a vote during the May-June Constitutional voting period, along with the previously presented motion to change the name of the organization to Feline Conservation *Foundation*.

Both Brian and Dawn stated reservations about the use of the word "handler," which brings to mind hands-on interaction that is not necessarily a true depiction. They prefer something more relevant, like "experience," and think it could be tied to the membership application, as could the

professional level information. This would simplify the application process and maybe encourage more people to go for the higher levels of membership. This portion of the membership change is still pending further fine tuning, to clarify for use and meet requirements of the Constitution.

Plans for the Conference were discussed with continued talk with Turtle Back Zoo. Doing it there, with a hotel in walking distance, would require no extra trips and no buses. FCF meetings and classes could be held onsite, meaning no extra facility rentals. Members would have additional access to the zoo. The FCF would still need to pay for any catering cost, but much less than previous hotel charges for those events.

After further talks with the zoo, the plans will be announced to the membership.

Phyllis Parks, FCF Secretary

Positive Changes for Our Future

By Dawn Strasser, FCF Treasurer 2019

FCF members, you will see a lot of new, positive changes as we move forward. I like to think of it as a face-lift. Dr. Chris Tromborg formerly discussed “The Rationale for Migrating from ‘Federation’ To ‘Foundation,’” our interest in updating our name to Foundation in the last quarterly *Journal*. We will be voting on the Constitution Article 1-Name, this May. We want to stress how important this will be in moving forward with the FCF.

Foundation in general means the support system or building blocks when building a house or a structure. Think of the FCF as a foundation to better the lives and support for exotic felines. There are so many obstacles that we will be facing

that we need good support to stand on.

We are also voting on adding a “Novice Membership” to the Constitution Article 111-Memberships. We want to be inclusive with those who might still be in school with limited income. We are adding Novice at a reduce cost, but there will be no voting rights, nor can they dictate policy for this membership. They will not receive a hard copy of the *Journal*. They will be able to download the *Journal* on their own, thus keeping our cost down by allowing them to join. We feel it is necessary to start including the next generation early on, to become vested in exotic feline care and regulation, ultimately becoming advocates for them. We are going to need strong leaders for our future, so let’s start early.

I feel I am part of a larger picture here

with a very active board of directors moving us forward with social media, more education, more conservation, and more advocacy. It is my hope to motivate our members to become active on their own through more education and fundraising for conservation.

The new Facebook page is allowing us to share more information between ourselves as professionals. We will be launching a new website. We are hoping to expand our education classes to include more information and maybe online classes. We need more members involved with conservation and the fundraising necessary to promote these programs. Most important, we now have a voice in Washington with our new “Advocacy Fund.”



Mindy Stinner Advocates for the FCF in Washington, D.C.

By Mindy Stinner

FCF President Mindy Stinner traveled to Washington, D.C., on April 22-23, 2019, and, accompanied by FCF lobbyist Bill Hanka, met with key Democratic and Republican committee staff in the House and Senate to discuss needed alterations to the pending “Big Cat Public Safety Act,” H.R. 1380.

Mindy, who also met with the staff of H.R. 1380 sponsor Rep. Mike Quigley (D-IL), pressed them to consider including an exemption for trained volunteers at USDA-licensed facilities, since many smaller zoos and sanctuaries rely on experienced volunteers to assist with some aspects of animal care to ensure animal welfare needs are met. She requested they provide clarity on which individuals could be exempted as “contract employees” under the bill. For example, under this legislation, would landscapers hired by the facility be allowed behind permanent barriers in order to complete their work?

Mindy also raised the issues as to which federal agency (USDA or USDI) would be tasked with promulgating the regulations if H.R. 1380 became law, and the answer

was unclear. The bill would modify the language of the Captive Wildlife Safety Act, a Lacey Act amendment, which makes USDI’s Fish and Wildlife responsible for enforcement. However, they do not generally inspect facilities, and would not previously have had access to the recordkeeping required by this bill. Mindy asked about the conflict created for wildlife sanctuaries that also hold a USDA Class C exhibitor license as to which exemption they should claim, and how they will be held to one set of requirements.

During the meetings, Mindy was able to learn that the House Natural Resources Committee will likely vote to approve H.R. 1380 sometime this spring – although she also learned that it will not be among the bills considered by the committee at its first “markup” of pending legislation on May 1, 2019.

The Democratic staff, in coordination with Rep. Quigley’s staff, were open to making changes to accommodate bona fide trained volunteers under the exemptions for USDA-licensed facilities and even talked through some possible bill language changes with Mindy. They cau-

tioned her, however, that they were wary of allowing facilities to claim the exemption for so-called “pay-to-play” volunteers, which would be a loophole for allowing public photo opportunities with cubs and older cats to continue.

Mindy also discussed the FCF’s concerns with H.R. 1042, the “Providing Responsible Emergency Plans for Animals at Risk of Emerging Disasters (PREPARED) Act,” especially since all contingency plans may be discoverable by FOIA if required to be submitted to the Secretary. It would be an issue if activist or terrorist groups could access a facility’s plans through an FOIA request and plan an attack or direct action using that information to target a site’s response. Expecting the USDA to promulgate new regulations for facility contingency plans is unrealistic without time to implement the requirement and ensure appropriate training is available, and would create burdens for USDA and the facilities they oversee. The 30-day timetable for requiring facilities to train their staff is not realistic in all situations. It is unclear if this bill will be moving forward.

It Takes a Village to Raise a Minnow

By Liz Felton

It is easy to forget sometimes, aside from being awesome predators, that our non-domestic, mid- to small-sized cats are also prey. This is a game changer in the way we approach an “aggressive” cat.

Minnow is a four month old fishing cat residing at Panther Ridge Conservation Center in Loxahatchee Groves, Florida. He spends a great deal of time with the director, Judy Berens, and, at just a few months old, began showing signs of aggression towards the keepers.

The universe certainly equipped these little guys with a natural defense in the form of an impressive, deep growl present in kittenhood. It did not take long for the keepers and cat to fall into a perpetual loop of believing each would cause the other great harm. To complicate matters, Min-



Not all cats avoid water; in fact, Minnow the fishing cat dives right in to catch some little goldfish. Photo by Kandice Seitz.



Fishing cats have webbed feet, which helps them swim and catch fish. Photo by Kandice Seitz.

now would seem to be fine when Judy was present; however, in her absence the growling, hissing, popping, and charging would resume towards other humans. It is important for an animal in captivity to be secure in its environment, especially when it will be displayed to the public. We discussed Minnows needs and Judy's goals for him and began to create a plan.

I met with Minnow in the place he was most comfortable, with the person who gives him the most comfort, Judy. As I entered the house, he ran to hide under a chair. I laid down on the floor, not looking directly at him, and began talking to him softly. It did not take long for him to come investigate. I had a stuffed toy in my hand, and that was what we both focused on rather than each other. Within five minutes, he was in my lap allowing me to pet him. We then took the meeting to his outdoor enclosure, where he continued to engage in play. This went on for about an hour. As I was

getting ready to leave, the keepers asked how it went, and when I said, “Great!” they did not believe me. So I went back in with Minnow and the keepers followed slowly, one at a time, not staring directly at him. In no time, there were five of us in the enclosure and Minnow was comfortable enough to play. I wish that was the final solution, however, reportedly the next day Minnow was back to growling and charging at the keepers as they passed his enclosure.

The next step required a change of environment and probably the end of Minnow's trust in me forever. We put him in a transport and I brought him to my home. I am fairly certain he will always see me as the person who kitty-napped him and we all know how a feline can carry a grudge. I called on every person I could think of who had feral cat and fear-based aggressive dog experience. A half dozen or so generous souls gave their time to Minnow and recognized his hisses and growls for what they were, absolute terror that the strange, giant humans were going to do some sort of injustice to him.

One of the people called upon was Michelle Martiya, the owner of Essential Animal Training in Florida. Michelle had been working with my foxes and, having noticed her gentle approach in positive



Concentrating intently, Minnow braces for the kill. Photo by Kandice Seitz.

reinforcement training, I felt she would be a good fit for working with Minnow. Michelle has a great deal of respect for the personal space of her fur clients and was able to sit with Minnow successfully from day one. She made the observation early on that Minnow was not particularly food-motivated nor interested in “talking” with humans. However, if both he and the human are focused on a toy and engaging in play therapy, he becomes quite relaxed and will even tolerate being pet.

Minnow is now home in his enclosure at Panther Ridge. He no longer hisses and pops in fear with each person passing by his cage. Volunteers continue to spend time engaging him in play therapy, and Michelle continues to work with him and has begun target training as well as training him to shift from enclosure to lockout for cleaning. This is an important activity for captive wildlife to be comfortable.



Playing in the pool is a daily routine for Minnow. Photo by Kandice Seitz.

Shifting allows for safe and thorough cleaning of enclosures and provides a means for evacuation in the event of an emergency.

When last I saw him, Minnow was working with Michelle, and I received an open-mouthed, soundless “hiss” as a

greeting. I am not sure that, after absconding with Minnow weeks ago, if he will ever really trust or forgive me enough for taking him from his home for a few days. He may never crawl into my lap again to be petted, but the trade-off for willingness to tolerate more people in his presence was a good deal. He did, however, allow me to engage in play therapy with a toy in the water and that was a great honor. Minnow is still a work in progress, but although easily

frightened, he is a sweet soul and does well with the work.



Minnow smiles for the camera. Photo by Kandice Seitz.

The Realm of the Tiger Conservation Program

By Dawn Strasser

I am sitting here with a fellow exotic feline keeper, Mike, who has worked with over 23 species of exotic felines during the past 35 years. But this is not his first conservation project. He just returned from the trip of a lifetime. After a long 25-hour flight, with three different plane changes, you know you are not in the U.S. when you are holding a piece of paper with your name on it for someone to collect you as you arrive in Malaysia.

MYCAT is a project started in 2009, by Dr. Kae Kawanishi, “Dr. Kay.” At the early age of ten, she knew she wanted to study and protect wildlife. After doing her thesis on tigers in this area, she saw a need for their protection, along with all other native species. The area we are talking about is the Yu River Wildlife Cor-



Michael Land spent time in the jungles of Malaysia volunteering in the MYCAT project to patrol tiger habitat and look for snares and checking the camera traps.

ridor, adjacent to Malaysia’s largest national park, Taman Negara.

Mike had signed up to volunteer this year in “The Realm of the Tiger.”

What does this mean? It is a once-a-year program for zookeepers, educators, and citizen conservationists to be involved in a field conservation and education program. This small group of volunteers are immersed in the jungles of Malaysia. The biggest highlight is the daily seven-kilometer walks that take about five to six hours to complete. Mike participated in CATWalks (Citizen Action for Tigers), an active patrol that walks the critical tiger habitat. Everyone got first-hand experience and insight into the tiger habitat, conservation needs, and threats faced by them and their cohabitators (elephants, clouded leopards, spotted cats, sun bears, fishing cats, and flat-headed cats) and their prey. They have volunteers (CAT) once a month who assist the local Bateq walking the logging roads and

animal trails looking for snares, checking the camera traps, and reporting illegal activities to law enforcement. The volunteers are also exposed to pugmarks (tracks) and scats to monitor the local wildlife presence. One memorial moment for Mike while walking along a path was a smell he is familiar with, but not in this setting. Most might think it is a strong, musty barn smell or might not even notice it, but Mike recognized the smell to be an elephant that had just urinated where they were walking. Even though they are big, elephants are sneaky, so everyone had to be on alert, as this was not a walk in the park.

MYCAT has found in this thick forest that bodies on the ground are the best defense against poachers. The more bod-



Camera traps are being installed to monitor wildlife and poachers.



Posing in front of one of the large jungle trees.



Members of the group who participated in MYCA with Michael.

ies and eyes in the forest, the more the poachers are kept away. Since they have started, the number of snares has gone way down. They used to number hundreds a day, but now not so many, although they still have to keep up the pressure. The poachers are constantly

Another project MYCAT participates in is habitat reforestation. They have a nursery where they grow local seedlings. These seedlings are replanted after the deforestation has taken place. One might think the trees would grow back on their

moving into new areas, and so do the CAT-Walks.

these clear cut areas before the underbrush comes in.

On Mike's last night, they went on a river ride on a man-made bamboo raft for an overnight camping trip with the indigenous people. Set up beside a campfire, he ate local food and slept in a hammock. And what trip would be complete without leaches? I think it is a rite of passage that you have at least one leach bite.

As you return home from an experience like this, it puts into perspective what we do here in the States. It does not matter what species we work with; all felines need our support, for their wild counterparts are struggling. This is a program anyone can sign up for as a volunteer if they are interested. It is an ongoing fight for conservation. The snares that are used do not discriminate; they catch whatever is in their path.



A seedling nursery grows a variety of trees that will be transplanted in cleared areas to reforest the habitat.

own, but once the original trees are removed, so are all the seedlings underneath them, allowing just brush to grow back instead of trees. So they replant over



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Large bamboo poles are lashed together to create rafts that the group used to float down the river on a camping trip.

In Memory of Jim Fowler, America's Original Wildlife Conservationist Icon

By Jim Broadus

I was deeply saddened to hear of the passing of Jim Fowler. The enormous good he did for wild animals and conservation of our planet can never be overstated. A few years ago, someone say to me, "His time is passed and most of his ideas are out-of-date."

I didn't want to be rude, but I should've said, "Fifty years from now, the world will still be trying to catch up to Jim Fowler. He was a conservationist and protector of wild animals before the rest of us were even born, much less understood the enormous responsibility we have to keep the planet safe for future generations."

He's one of the few people I'd call a "genuine trailblazer" in that there was no path to follow; he had to make it on his own. I was honored to be his friend.

Even though we have a billboard sign prominently displayed here at the Bear Creek Feline Center, depicting Jim Fowler



Photo taken on Jim's last birthday, this past April, in Albany, Georgia.

sitting in the "Wild Kingdom" Jeep, many of our guests don't recognize him. So on tour days, as we meander through the maze of big cat enclosures, I refer to Jim as my mentor, and I usually spin a yarn or two, telling the story about Jim's encounter with the anaconda! And, it's true: While filming Mutual of Omaha's

Wild Kingdom, a Sunday TV staple for millions of Americans, on location down in South America, show host Marlin Perkins suggested that Jim jump into murky water with a giant snake and, to the amazement of the film crew, he did! That is pretty amazing since big Jim was not a herpetologist... in fact, he was not fond of snakes at all.

Jim was actually a bird of prey expert who was an eminent authority on raptors, ostriches, and other winged critters. His knowledge of reptiles was limited, but over the years as we traveled together exhibiting our cats, I learned that he had a vast understanding of all things wild! He routinely traveled with a cheetah sitting beside him as he drove across America during the early days of his career. Later, I was honored to accompany him during the twilight of his life, and I recorded hours upon hours of his fables, stories of his past and his view on the future, as we face the extinction of thousands of animals that live in nature's "Wild Kingdom."

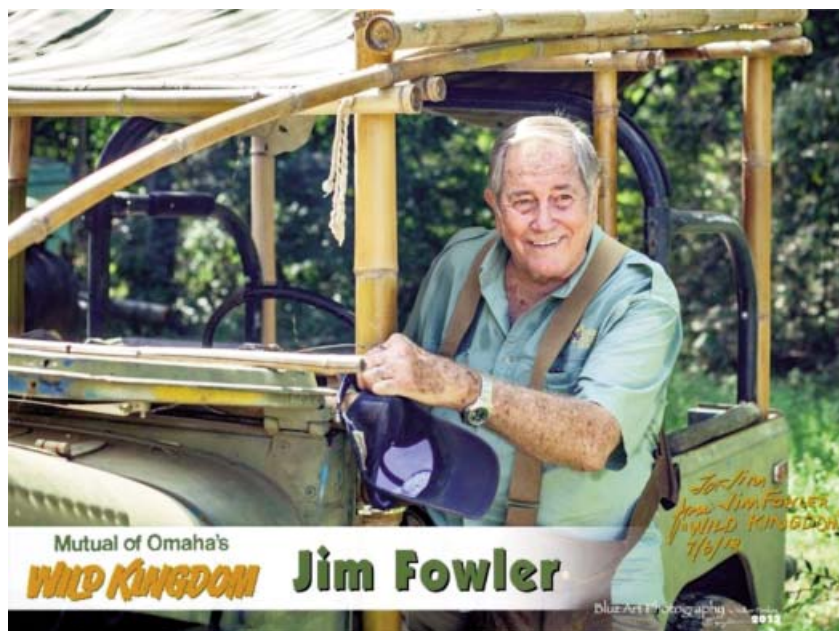


Photo taken about six years ago on location in Chipley, Florida, at a wildlife exhibit. Now this photo is proudly displayed here at Bear Creek Feline Center.



Jim's love of animals ranged all over the map, whether it was an ostrich or an ant.

Hunting Pumas to Save Deer Could Backfire, New Research Suggests

By John Cannon, Mongabay staff writer
Reprinted from Mongabay.com

A new study finds that the age of individual pumas near Jackson, Wyoming, had the greatest influence over the prey they chose to hunt.

Older mountain lions went after elk, among the largest prey species in the study area, while the younger cats hunted small animals like raccoons, as well as mule deer.

The research calls into question the validity of recent wildlife management plans in the western United States to grow mule deer populations by culling mountain lions, the authors say.

The puma family took biologist Mark Elbroch by surprise. They were supposed to be a ways off. But here they were, year-old kittens, bungling the final moments of a baby mule deer's life in a matted-down circle of grass as the mother mountain lion looked on.

Elbroch, the puma program director for Panthera, saw a rare opportunity to capture on film what biologists call "operant learning." So he set up the remote cameras he had in his backpack, and he waded back into the hip-high grass of western Wyoming and out of sight.

What unfolded on film over the next 25 minutes confirmed that "mountain lions take a long time to become efficient killers," Elbroch said. Even at a year old and each outweighing the fawn by 50 pounds (23 kilograms) or more, he said, "They're just clueless."

They still hadn't dispatched the screaming fawn when the kittens dragged it off camera. "It's horrific to watch," Elbroch said.

It turns out that, as pumas learn to hunt throughout their lifetimes — even long after they've left their mothers' sides — it affects their choice of prey.

This discovery, reported March 29, in the journal *Conservation Science and Practice*, potentially calls into question the assumption

that allowing hunters to kill more pumas (*Puma concolor*) will translate into more of the elk (*Cervus elaphus nelsoni*) and mule deer (*Odocoileus hemionus*) that human hunters' prize. This assumption has led to recent decisions to increase hunting of mountain lions in the western United States.

Elbroch and his Panthera colleague, Howard Quigley, pulled together data on 13 GPS-collared pumas between April 2012 and January 2016, from the organization's long-term Teton Cougar Project based near Jackson, Wyoming. They then modeled the data to gauge the influence of different factors, such as age, elevation, and the animal's sex, along with various combinations of these variables, on the prey these individual animals went after. The results of the analysis, Elbroch said, were "incredibly simple."

"As pumas get older, they tend to select larger prey," he said. And the reason for that is equally straightforward.

"It takes time to learn how to take down monstrous animals that are eight times your size," Elbroch said. Mountain lions "risk their lives every time they jump on the back of something big."

Young cougars typically go after small

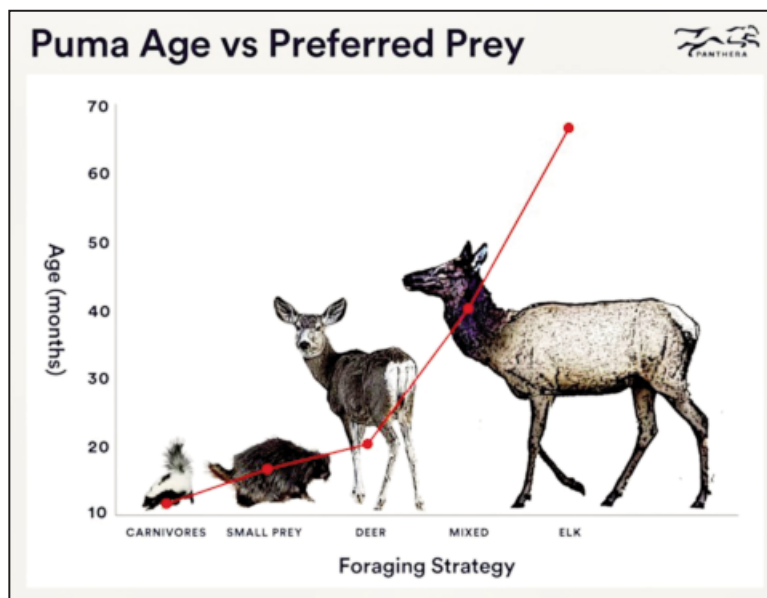


A camera trap photograph of a mountain lion in California. Image by Sebastian Kennerknecht.

prey like hares, raccoons, and grouse. With age, they graduate to killing mule deer, and then to specializing on elk, the most common preference among the cats in the study and the one favored by the oldest animals.

Those results suggest that recent moves to increase the numbers of sought-after trophy species of herbivores like mule deer might be ill-advised and counterproductive. Colorado Parks and Wildlife, the state's game agency, has embraced a "predator control" strategy involving the hunting and trapping of up to 15 pumas and 25 black bears (*Ursus americanus*) a year with the goal of boosting a flagging mule deer population in the state's northwest corner. The deer's meat and the males' antlers make it a favorite quarry of hunters, and Panthera said pressure from hunting groups helped set this plan in motion.

But earlier research in Idaho, demonstrated that tak-



A graph shows that older pumas hunt larger prey species. Image by Panthera.

ing pumas (and coyotes) out of the equation didn't help local mule deer populations grow, even though more females and fawns survived. Another study revealed a correlation between sustained puma hunting and a younger puma population, as hunters seek out and kill the oldest and largest cats. The upshot of that finding, taken together with this new study, is that killing more pumas might actually increase the proportion of the population that specializes in mule deer, which are smaller and easier to bring down than elk, Elbroch said.

"The conclusion that unintended consequences are possible is a really important one," Kyle Knopff, a wildlife biologist with Golder Associates in Calgary, Alberta, said in an interview.

Knopff, who was not involved in this study, noted that 13 animals was a small sample size that made it difficult to draw

But, Knopff added, more research is needed to confidently say that puma hunting will or will not increase populations of ungulates, the hoofed mammals that include elk, deer, and bighorn sheep.

"In some systems that may be true," he said. "In others, it's clearly not."

"In my view, the actual scientific conclusion is that we need to be very careful how and under which circumstances we harvest predators if our intentions around predator management are to have some certain outcome for ungulate populations," Knopff said.

"The take-home message here is that it does matter what animals you remove from the population," John Laundré, a cougar biologist at Western Oregon University, said in an interview.

Laundré said Elbroch's study supported what researchers have been saying about predator-prey relationships for decades.

"It's not the predator that determines how much prey there are," Laundré said. "It's the weather, how much food, how cold it gets, how hot it gets, all

these types of things."

Indeed, many scientists blame protracted droughts across the western U.S., not pumas or other predators, for diminished mule deer numbers.

Still, reining in predator populations remains a favored wildlife management strategy at agencies across the West. Elbroch said it was important to note that the legal hunting in its



A puma eating a mule deer fawn. Image by Mark Elbroch/Panthera.

current form across the western United States and Canada won't wipe out pumas, Elbroch said. Wildlife managers "have done a super job of maintaining mountain lions on the landscape."

But, he said, "I do believe that hunting is the greatest threat to the stability and the ecological function of mountain lions."

In a recent study, Elbroch and his team made the case that mountain lions are "ecosystem engineers," because the carcasses they leave behind provide food and habitat for a wide range of other creatures. The researchers found 215 species of beetles in prey animals killed by mountain lions.

While current management strategies ensure that cougars persist in the West, these approaches don't account for the "unintentional effects" of hunting, Elbroch said. In his view, that calls for a "move away from the numerical assessment" of mountain lions.

"Numbers are not what build populations. Individuals build populations," Elbroch said. "Mountain lions are individuals. We need to recognize that."



Game agencies often favor controlling predator numbers as a way to increase the number of deer and elk on the landscape, like these male mule deer, but this research suggests that this strategy may not work. Image by Mark Elbroch/Panthera.

more specific conclusions, and agreed with Elbroch's view that the results warranted further testing with more mountain lions over longer time periods. Knopff also noted the "incredible amount of effort" that such research would entail.

In 2010, Knopff, then at the University of Alberta, and his colleagues published a study in *The Journal of Wildlife Management* that examined the prey selection of more than 50 pumas in Alberta. Among their most significant findings was the notion that individual puma prey preferences varied, with male pumas, which are much bigger than females, going after large game like moose (*Alces alces*).

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The Fishing Cat Fund

By Dawn Strasser

As the nursery keeper for the Cincinnati Zoo, I have worked with Linda Castañeda for many years. Linda is the head of the Cat Ambassador Program at the Cincinnati Zoo. My neonatal expertise has helped her department, the Cat Ambassador Program (CAP), hand-raise many baby animals - most of which are cats. Cheetahs, servals, ocelots, domestic housecats, a fishing cat, domestic dogs, a porcupine, and even a red river hog have come through the nursery on the way to the CAP. Recently (while raising the newest batch of babies), I sat down to talk with Linda about how she got interested in fishing cats. Fishing cats are a strange species, with adaptations like webbed feet, but they are not a species commonly talked about, even in the zoo world.

Linda's response was simple - they chose her. Like so many things in life, we are sometimes chosen to be a voice for others. The Cat Ambassador Program was started by Cathryn Hilker, who is well-known for her love and conservation support of cheetahs. Cathryn has spent her life being an advocate for cheetahs and inspires the current CAP team to be advocates for all cats as well. In fact, Linda's original goal was to be the education adviser for the Cheetahs SSP, but for a long time the Cheetah SSP did not have an opening. One year at Felid TAG, she was encouraged to take on another education adviser role and the Fishing Cat SSP had an opening. Since the CAP housed a fishing cat ambassador named Minnow, Linda agreed and, in the process, learned that not much attention is given to the fishing cat (or any small cat species); everyone seems to focus their attention and funding on the big cats. Linda decided to be the champion for this species, and here we are today. In 2015, with her own seed money, she started a nonprofit named the Fishing Cat Fund, to work alongside the fishing cat SSP to fund programs that support the fishing cat. To date, the Fishing Cat Fund, now its own 501c(3), has



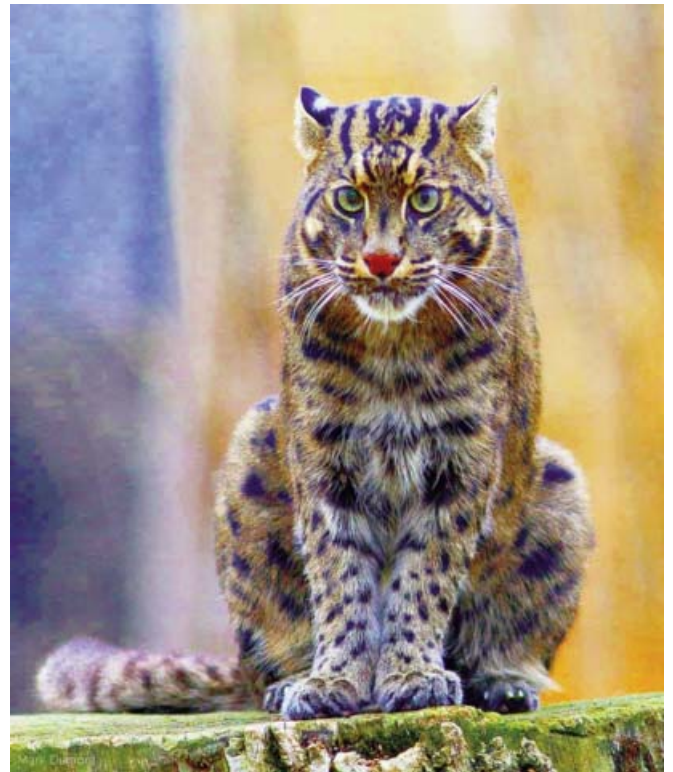
Feline trainer Linda Castañeda and the Cincinnati Zoo's ambassador fishing cat, Minnow.

been able to raise over \$10,000 for fishing cat conservation. A small start, but small funds go a long way in the fishing cat range countries of Asia, such as India, Sri Lanka, and Nepal. Along the way, the Fishing Cat Fund has gained support from the Cincinnati Zoo and the Denver Zoo, and various AAZK (American Association of Zoo Keepers) have helped hold small fundraisers for the Fishing Cat Fund.

From the start, the Fishing Cat Fund wanted to create a mission that guided funding; the Fishing Cat Fund works collaboratively with nonprofits to increase fishing cat range and populations through global education and conservation. So far, the funds have been dispersed to India, Nepal, Java, and Sri Lanka. Project funds have been used to map out habitats, purchase camera traps, create children's books and educational material, sponsor environmental awareness programs for children, adults, and government employees, and support conservation staff

working to save this species. The Fishing Cat Fund provided support for the first International Fishing Cat Symposium in 2015. Having delegates from eight different countries in one room to discuss the fate of fishing cat conservation is a huge accomplishment when you figure most of the time we cannot even decide what to have for dinner! This year, the Fishing Cat Fund hopes to send support for the next International Fishing Cat Symposium, which will be held in Sri Lanka in December 2019.

It has been fun sitting here with Linda listening to her get excited about what has been accomplished so far. It all started with one person with a passion to do more for the animals she takes care of, to work for the species beyond the zoo gates. One great thing about community-based conservation is that you help all the other species that live in your focal animals' range. This means that fishing



Minnow performs for audiences as part of the Cincinnati Zoo's Cat Ambassador Program.



Kathy Newton

A soaking wet Minnow dives off the tree stump back into the water.

cat conservation efforts also benefits other cat species such as clouded leopards, Bengal tiger, jungle cat, rusty spotted cat,

gram can help so many species. And one person can make a difference, even if you

leopard cat, and even the elusive golden cat. Other animals benefit as well - fishing cat range overlaps with pangolin, sloth bear, gharial, Indian rhino, Asian elephant, and various other endangered birds, mammals, and reptiles! One single pro-

do not live anywhere near the species you are helping.

So what can you do to help? While you might not have or worked with fishing cats, the area they live in supports so many other species, one that you might have a passion for the conservation of and/or have in your care. The FCF's Conservation Committee is hard at work coming up with fundraisers and ways individuals or facilities can actively get involved with small conservation projects that make a big difference. Be on the lookout for updates or join the Conservation Committee at the upcoming conference June 14-16, 2019, at the Turtle Back Zoo.

To learn more, go to <http://www.fishingcatfund.org/> and follow the Fishing Cat SSP Facebook page (<https://www.facebook.com/FishingCatSSP/>) for updated news. Linda is still working on the [fishingcatfund.org](http://www.fishingcatfund.org) website!

The Populations of the World's Wild Animals Have Fallen By More Than 50 Percent

Excerpt from theweek.com

As the human population has swelled to 7.5 billion, our species' massive footprint on planet Earth has had a devastating impact on mammals, birds, reptiles, insects, and marine life. We've driven thousands of species to the edge of extinction through habitat loss, overhunting and overfishing, the introduction of invasive species into new ecosystems, toxic pollution, and climate change. In the past 40 years, the number of wild animals has plunged 50 percent, a 2014 study found. And the World Wildlife Fund (WWF) estimates that populations of vertebrates — higher animals with spinal columns — have fallen by an average of 60 percent since 1970. The past 20 years have brought a 90 percent plunge in the number of monarch butterflies in America, a loss of 900 million, and an 87 percent loss of rusty-patched bumblebees. Only three percent of the original populations of the heavily fished Pacific bluefin tuna remain in the sea. "We are sleepwalking toward the edge of a cliff," said Mike Barrett, executive director at WWF.

How many species are already extinct? Scientists can only guess. Earth is home to between nine million and as many as

one trillion species — and only a fraction have been discovered.

Vertebrate species have, however, been closely studied, and at least 338 have gone extinct, with the number rising to 617 when one includes those species "extinct in the wild" and "possibly extinct." Recent vertebrate extinctions in the wild include the northern white rhino, which lost its last male member in 2018, and Spix's macaw, a blue parrot native to Brazil. But 99 percent of Earth's species are invertebrates, and 40 percent of the species known to have died off since 1500, were land snails and slugs. One, the Hawaiian tree snail, died out on New Year's Day, when its final member, George — dubbed "the world's loneliest snail" — passed at age 14. "I'm sad," said Rebecca Rundell, a biologist at State University of New York. "But really, I'm more angry because this was such a special species, and so few people knew about it."

How many species are endangered? There are 26,500 species threatened with extinction, according to the International Union for Conservation of Nature (IUCN), a global network of some 16,000



scientists. That includes 40 percent of amphibian species, 33 percent of reef-building corals, 25 percent of mammals, and 14 percent of birds. There are now only 7,000 cheetahs left, and the number of African lions is down 43 percent since 1993. Only about 100 Amur leopards — often poached for their beautiful coats — are left in the wild in southeastern Russia and China. A third of insect species are endangered, and the total number of bugs on Earth is dropping by 2.5 percent every year. "There are examples of species all over the world that are essentially the walking dead," said biologist Paul Ehrlich.

2019 FCF Convention in West Orange, New Jersey --- We Can't Wait to See You There!

FCF Conference Hotel:

Reserve your room at the Avenue Hotel, 555 Northfield Avenue, West Orange, New Jersey, by calling 973-731-5300. This hotel is directly across the street from the zoo. Hotel offers free Wi-Fi, is pet and kid friendly, air conditioned, free parking, with small fridge in most rooms. Microwave in breakfast area is available if you need it. FCF Conference rate is \$99 and includes breakfast each morning.



FCF Conference Meals:

To be assured a vegetarian/vegan option, pre-registration is highly recommended, and it must be indicated on the registration form. Early-bird registration (\$200) ends at midnight on Friday, May 31st.

FCF Basic Wild Feline Husbandry Course:

The Basic Wild Feline Husbandry Course is taught on Thursday, starting at 8 am, at the Turtle Back Zoo. This course provides a broad overview of feline husbandry, enclosure design, regulations, and more. Attendees for that course can also register for Conference that day.

Contingency Planning resources Class:

This valuable workshop is recommended for any feline owner or handler, whether individual, small facility, or major zoo. Attendees come away with plenty of written materials for future reference. Class is held on Friday, June 14th, from 10 am to noon.



When and where is onsite registration?

Thursday, 6/13: 7:30 to noon – Register at Zoo Education Building, Classroom 2
Friday, 6/14: 8:00 to 4:00 – Register at Zoo Education Building, Reception Desk
Friday, 6/14: 5:30 to 7:30 – Register at Zoo Education Building, Reception Desk
Saturday, 6/15: 7:30 to noon – Register at Zoo Education Building, Reception Desk

While we are staying across the street from the Turtle Back Zoo, all events are hosted by the zoo and registration is at the zoo. You may bring any donated items for the silent and live auction with you to the zoo when you arrive to register for Conference. All donated auction items help the FCF with its educational and conservation programs.

Once attendees have registered and received their lanyards, they're good for zoo access any time the zoo is open from Thursday through Sunday. Lanyard is good for attendee and family, and gives access to zoo, train, and butterfly house.

FCF Conference Conducts Contingency Planning Resources Workshop -- Friday, June 14th

Hurricanes, wildfires, floods, animal escapes, and human injuries are just some of the emergencies you may face someday. Your level of preparedness ultimately determines how successful your response and recovery will be, so it is critical to have plans in place in advance of disaster.

Soon, comprehensive contingency planning will be a requirement for USDA licensure. Even without this regulatory requirement, it is simply advisable to know in advance what to do, and that you have the means to do it, before you are facing a disaster.

The FCF Contingency Planning Resources Workshop will be held at the Turtle Back Zoo Education Center, Classroom 3, from 10 am to noon. This fast-paced, interactive working group is designed so you walk out with:

- A list of resources on where to go for help building a robust, yet flexible, contingency plan, and guidance on understanding how best to use those resources;
- A process to help you identify the risks your facility may face that require contingency plans;
- Information to take to your leadership, boards of directors, and key players so they will understand the contingency planning process and their part in it;
- Guidance on how to identify and work with relevant governmental agencies, including local, county, state, and federal officials;
- An introduction to the Incident Command Structure (ICS), your role in it, and why it is vital you understand how it is used; and
- A line of communication to the instructors for help and advice after the workshop.

The goals of the workshop are to transfer knowledge that is not easily accessible through standard information channels, while maximizing what we can learn from one another within an interactive framework. Register for this two-hour workshop for \$40.



The FCF Wild/Exotic Feline Husbandry Course will be taught Thursday, June 13th, at the Turtle Back Zoo Education Center, Classroom 1, at the start of the FCF Conference. This eight-hour class is \$110 FCF members, \$145 non-members.

Broaden your horizons, keep up with the latest in feline healthcare and husbandry, including enclosure design and enrichment, and gain an understanding of the laws and government agencies that regulate captive husbandry of wild felines.

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



FCF Conference Schedule Summary:

Thursday
8:00 am to 5:00 pm FCF Husbandry Workshop (Zoo Education Center, Classroom 1)

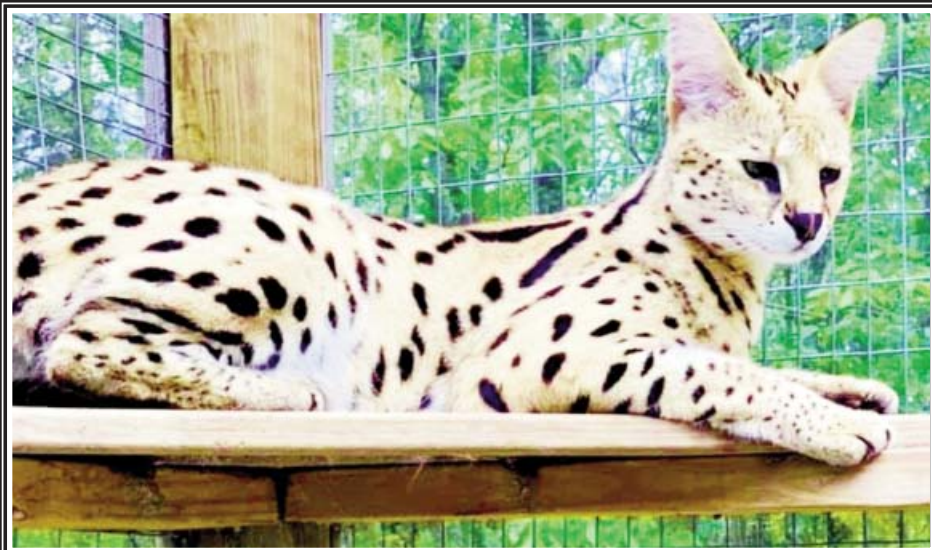
Friday
8:00 to 10:00 am Contingency Resources Class (Zoo Education Center, Classroom 3)
10:00 am to 12:00 pm Board Meeting (all members welcome)
1:00 to 4:00 pm Optional Special Event with Dr. John Bergmann (\$20 fee, paid onsite). This is a three-hour event that includes a lecture, tour of the onsite clinic/hospital, and opportunities to shoot the various darting weapons used at the zoo. The \$20 fee will be collected at registration. It is a donation that will be made directly to the zoo to reimburse them for consumables used in the class. This event will depend on Dr. Bergmann's availability – he is, after all, the veterinarian for multiple locations and may be called away in the event of an emergency.
1:00 to 4:00 pm Committee Meetings (agendas to be announced onsite)
6:00 to 9:00 pm Ice Breaker Dinner and Animal Encounter (enter through Education Center)
The animal encounters are likely to include penguin, sloth, and cheetah, however it will be dependent upon which ambassador animals are available.



Saturday
8:30 to 11:30 am General Session (Bill Hanka, Alan Smith, and others) in Classrooms 1-3
11:30 am to 12:00 pm Membership Meeting, Classrooms 1-3
12:00 to 1:30 pm Lunch at Zoo (Café lunch vouchers provided)
1:30 to 5:00 pm Host Zoo Programs & Optional Zoo Free Time (sign up for one or more programs during registration – each will be held four times): Lion House Tour, Giraffe House Tour, Onsite Animal Clinic/Hospital, and/or Penguin Pavilion and Penguin Ambassador Encounter
1:00 to 3:30 pm Fire Hose Enrichment Activity at Main Gazebo
5:00 to 5:30 pm Silent Auction Closes in Classrooms 1-3
5:30 to 10:00 pm Safari Night Banquet Dinner on Top Level of Zoo Café. Includes Dinner, Social, and Live Auction



Some of the board and/or committee members may plan to meet on Sunday. We are reserving two of the classrooms in the zoo's education center on Sunday during normal zoo hours (10 am-3:30 pm). No meal service is planned.



Khalissi the serval enjoys some outdoor time. Photo by Sue Howard.



Gina Tkach raised bobcat Muraco from a kitten and the bond of love continues today. Photo by Taylor Sharp.

Your Best Shots



Conservators' Center caracal Asher checks out the floating bubbles. Photo by Taylor Sharp.



Something caught the attention of Moxie and Dakota, Jungle Encounter's ambassador bobcats. Photo by Debi Willoughby.



A



Gatorland's puma Lucy looks up at photographer Danielle Lucas.



Binx the Eurasian lynx at the beach. Photo by Bret Haughwout.



Katen the jungle cat relaxes at Conservators' Center. Photo by Taylor Sharp.



Kyanite's eyes practically match the bedroom walls. Photo by Teralee Harrel.

Lynxy Lady: Lessons in Hindsight

By Lynn Culver

Lynxy Lady was a two year old Eurasian lynx that was born at our facility. She was the runt of a litter of four, and had a scrappy personality. When I brought her in with her littermates for hand-rearing, she was scratched up and it was clear competition for the nipples was stiff between siblings.

She developed a bond with me and really didn't like anyone else, so we did not sell her. We reared her with Natasha, a female Carpathian lynx cub we had purchased to be a mate to Vladimir, our adult male Carpathian lynx. When the girls were nine months old, they went into heat, banging around in the cat room trying



Eurasian lynx Lynxy Lady at age six months, and Carpathian lynx Natasha at 8 months, were reared together from cubs and grew up to be best friends.



Vladimir, Natasha, and Lynxy Lady investigate the water in the "kitty pool" in their enclosure. Photo by Teralee Harrel.

to breed each other, and I knew it was time to introduce them to Vladimir. We moved Vladimir into his fenced hillside exercise area and let both girls into his enclosure for a couple of

hours to observe behaviors through the common wall. All vocalizations were friendly, so we raised the slide gate and allowed Vladimir back into his enclosure. The introduction could not have gone better. Within an hour, Vladimir was gently mounting both of these young ladies and grooming and cuddling them. It was a very happy ending to a stressful event, and from that day forward the girls remained outside with Vladimir. Of course they were too young to conceive yet.

This year, Natasha, the Carpathian, and Lynxy Lady, the Eurasian, both went into estrus and bred with Vladimir again. Both were still rather young and I did not expect them to conceive; however, by late March it was clear that Lynxy Lady was carrying young and we were facing the problem of preparing her birthing enclosure with only a few weeks' time.

The potential birthing enclosure had a common wall and slide gate entry to the



This past February, Vladimir mated successfully with Lynxy Lady and the pairing produced a single kitten.

main enclosure, but these three cats had never been given access to it. Bart installed a camera monitor on the house so we could observe Lynxy Lady remotely. We made a few additions to the enclosure for privacy, leaning large bamboo poles against the walls so that other lynxes nearby could not see in. Then we opened the slide gate for all to visit the new space. About a week prior to the expected due date, we locked Lynxy Lady inside this enclosure and the waiting began.



A heavily pregnant Lynxy Lady looks out from behind a protective screen of Moso bamboo poles leaned up against the wire wall of her birthing enclosure.

One morning, we looked at the monitor and Lynxy Lady was calmly nursing a single kitten. She had gone into labor in the night and we missed everything, but at least she seemed quite content and all was well inside her den box. She spent almost all of her time inside with the kitten. She skipped dinner for two days after delivery, and then began eating normally. On the twelfth day after delivery, I opened the slide gate to the main enclosure and Lynxy Lady walked through to investigate her old home and stretch her legs. While she was out, I removed her kitten. Later that evening I let her back in so she could see the kitten was gone. I let Vladimir and Natasha, who were in the hillside habitat, back into the main enclosure where they greeted Lynxy Lady enthusiastically. I had kept the slide gate to the nursery open, and they investigated and smelled inside the den box where Lynxy Lady had nursed her kitten.

The next afternoon, I closed the slide gate to the nursery as the three were reunited peacefully. I fed everyone that night in their main enclosure at their routine feeding stations. The following evening when it was time to feed, I could only find Natasha and Vladimir. I knew I had left the slide gate down, but I checked the nursery enclosure just in case, and Lynxy Lady was lying in her house! I looked over at the slide gate and it was down, but beneath the gate was a shallow

depression, and apparently she had dug her way under the wall and back into the nursery. I entered the enclosure to make sure she was okay, and wondered if she might have mastitis from the sudden removal of her kitten. I asked her if she was depressed or not feeling well. She looked at me, didn't get up from inside the den box, and let out a little hiss. I filled in the hollow under the slide gate and decided to keep her locked up alone overnight

her, and finish sedating her with isoflurane gas for surgery. The technician pulled some blood for a CBC and the results showed she was not anemic, but had a low white blood cell count. I figured she must have an infection from the contamination and was glad I had taken her in that morning. The veterinarian shaved the area around the tear, flushed the wound, debrided the edges, placed a drain tube inside, and sutured it up. Now all she

so I could observe her appetite. The next morning, her evening dinner of chicken was uneaten and she was standing at the back of the enclosure. I could plainly see a large wound on her back. She had ripped her skin on the bottom of the welded panel when she wiggled under the wall to get back into the nursery space. We called the vet for an appointment and mildly sedated her and loaded her into a plastic kennel for the ride to the clinic.

She was very relaxed at the veterinary hospital and we were able to just remove the screws on the carrier, take the top off, cover her eyes with a towel to mask



A Motorola Focus 360 baby monitor allows us to check in on Lynxy Lady and her cub without disturbing her.



Lynxy Lady ripped the skin on her back when she wiggled under the cage wall. Fortunately, there was no muscle damage, but a wound of this size required vet care to clean, trim, insert a drain tube, and close with stitches.

needed was a few weeks to heal and she should be as good as new.

She was moved to the plastic kennel with her intubation tube still down her throat to wait for her to begin moving so the technician could remove the tube. I sat beside her watching her and waiting for that movement and then after the technician removed her tube, I noticed her breathing was quite loud and not normal. And she was drooling and had a mucus discharge from one nostril. I called the vet over to listen to her heart and lungs again, and he reported that she was okay. Once she was fully awake, I loaded her in the vehicle and proceeded to drive home. I stopped at the gas station and considered returning to the vet, as in my heart, I sensed something was not right. I had never had a cat make so much noise breathing after sedation, and why was there mucus coming draining out of her nose? I began to wonder if somehow the intubation tube was improperly positioned or if it ripped something when it was removed, because her nasal discharge was now tinged slightly pink with blood. But I

shook that feeling off and continued home.

I have butchered many a cow and calf in my life that perished from pneumonia, and they all had bloody mucus draining from their nostrils, so I worried that either she has a serious case of pneumonia or the intubation tube somehow tore something in her throat. I called the vet and told him I thought she might have pneumonia and I wanted an x-ray. I had not let her out of the crate since I got home, so I drove her back into town to the clinic. Now it was five hours since we had administered ketamine, but we were able to lift her out of the plastic kennel and place her on the x-ray table with no additional sedative. That was not normal for Lynxy Lady. Two x-rays revealed lungs that did not appear to indicate pneumonia. The vet looked up her nose for a possible bleeding polyp and down her throat, but could not find a cause for the bloody discharge. The vet reported that with his stethoscope, her noisy, labored breathing seemed to be louder the closer he moved toward her head area and away from her lungs. With no answers, but relieved it was not pneumonia, I once again drove home with her,



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wondering what was happening.

When we got home, I noticed she was dehydrated and I administered 300 milliliters of lactated ringer's solution, all I had. I called the clinic back and asked them to put out a liter of fluid because I was going to drive back into town for a third time and pick up more fluids. Bart and I set up a wire crate in the house and fixed her plastic carrier to it and opened the door. She walked out, stumbled against the wire crate, fell, and stopped breathing.

Shocked, mystified, and determined to find answers, we placed her body in a cooler with plenty of freezer packs for the night and called the vet clinic the next morning to arrange for a necropsy. However, the clinic was slammed with emergencies and the necropsy was delayed until the following day. The vet who performed the necropsy was not the same vet who treated her. He began at her bladder and he turned the organ inside out. The wall was covered with small, red polka dots. This, he said, indicated she had a UTI going on. Urinary tract infections can be expected after giving birth, and she might have had it for a couple of weeks. He examined each organ; kidneys, liver, stomach, intestines, and spleen were all fine. Then he cut down her throat and her trachea, which I strongly suspected would be ripped and bleeding, was actually fine; there was no tear or damage from the intubation tube. But when he opened the diaphragm and revealed the heart and lungs, there was no doubt her lungs were seriously degraded. Instead of fluffy pink and sponge-light, they were dark purple-red and collapsed. It sure looked like pneumonia to me.

How was I to know? With 20/20 hindsight, I observed that Lynxy Lady missed two meals after delivery, which is common in most mother cats. She stayed with her single kitten almost constantly, only leaving a short while to eat. That could be the sign of a devoted mother, or perhaps an indication that the cat did not feel well enough to do much else. She made an elaborate effort to separate herself from her cage mates, which I attributed to her desire to look for her kitten, but perhaps she just wanted to be alone because she was feeling so ill. She only refused to eat the one dinner prior to her death and, considering her injury, I attributed that to the pain of an infected wound.

When the vet performed a CBC to

check her white blood cells and reported they were low, he wasn't worried. That was a mistake. Looking back, this was the biggest oversight. Her wound was 18 to 36 hours old at the most when I brought her in. Not really enough time to become infected to the point that white blood cells would rise to mount a defense, become exhausted, and fall below normal. And there really were no obvious signs of infection; no puss or redness, just a contaminated wound that would soon have become infected if not cleaned, drained, and sewn up. That low white cell count was an indication to look further and it was ignored because the patient was presented with an obvious problem and everyone was focusing on the skin tear, not processing the information that the CBC revealed. The lungs were clearly the cause of her death, and the presumptive diagnosis was pneumonia. We wondered if it were bacteria, viral, or parasitic pneumonia. Slugs, snails, and even earthworms can carry parasitic worms that can migrate to the lungs. The veterinarian who performed the necropsy and I took another look at the x-rays of Lynxy Lady's lungs, and he stated he could not believe the lungs he removed from her were the same lungs on the x-ray images. He had to agree with the other vet, that had he seen those x-rays he would not have diagnosed pneumonia. A sample of lung tissue was fixed in formaldehyde and mailed it off to the state lab for analysis.

A week later the histopathology report arrived, and it stated, "The section shows marked congestion. Many of the alveoli are airless (atelectasis), which could be a pre-mortem or post-mortem change, but there is no complete atelectasis (a complete or partial collapse of the entire lung or area [lobe] of the lung, which occurs when the tiny air sacs [alveoli] within the lung become deflated or possibly filled with alveolar fluid) and no pneumonia. I don't see anything to account for multiple white spots other than occasional emphysematous alveoli and subsurface bronchioles that might have been prominent under a very thin zone of pleural atelectasis."

So what happened? I had a long talk



Concerned about her labored breathing and the blood-tinged mucus discharge draining from Lynxy Lady's nose, I texted this photo of her to my vet and told him I wanted to return her to the clinic for x-rays to see if she had pneumonia.

with my vet yesterday while some of my kittens were having a health checkup. We reviewed what happened to Lynxy Lady. He said her oxygen saturation under sedation was normal, and her breathing under sedation was normal. Her low white blood cell count was probably due to an undetected urinary tract infection, but that would not cause the breathing problem. Although it is extremely rare, the most plausible answer seems to be some sort of serious, fatal reaction to isoflurane gas, but I don't think we will ever really know what happened.

The stress of injury, chemical and gas sedation, and then surgery somehow overwhelmed her system. My final words of advice are -- don't have tunnel vision when you are working with exotic felines. They hide their illness. When a lab result does not match the symptoms you are focusing on, don't ignore it. Go back to square one and consider the possibility that there are other medical conditions going on.

Blast from the Past: Urolithiasis, Cystitis, and Urethritis

This Journal issue's "Blast from the Past" is 50 years old, and is as relevant and useful today as when it was composed. The Long Island Ocelot Club was nearly a decade old already, and this little newsletter for pet ocelot owners had regular medical article submissions by William Engler, as well as feline species spotlights by noted importer and successful feline breeder Robert Baudy, of Savage Kingdom in Florida.

Long Island Ocelot Club Newsletter
Volume 13 Number 2
March/April 1969

By William E. Engler

In this discussion, urolithiasis, cystitis, and urethritis will be considered together because, in most cases, they occur together as a result of the same causative condition, or one as a result of another.

On rare occasions, urolithiasis may occur in the female as a stone in the bladder. If this stone is one of considerable size and causing undue irritation of the bladder, surgery may be indicated.

Urethritis (inflammation of the urethra) alone or urethritis along with cystitis (inflammation of the urinary bladder) is occasionally seen, especially in the female. These cases generally are not complicated by occlusion of the urethra. They are usually caused by bacteria entering the urethra through its meatus (opening) in the vagina, growing in the urethra if not checked, spreading into the bladder.

Urethritis without occlusion is usually noticed by observation of the passage of blood at the time of urination. The blood is usually not uniformly mixed with the urine, the greater amount being passed either at the beginning or end of urination. Urination is frequent and usually only a small amount of urine is passed.

If cystitis accompanies the urethritis, and it usually does by the time the condition is noticed, the urine may be dark and /or uniformly blood-tinged, as with urethritis alone, or it may appear normal. If the cystitis is severe or of long duration, the cat may have a poor appetite or appear listless. Urination is frequent and of small amounts. With cystitis, thickening of the bladder wall occurs, the degree of which is accord-

ing to the severity of the condition and its duration.

Diagnosis of urethritis alone is made by the clinical signs and lack of evidence of cystic involvement. Diagnosis of cystitis is made by the clinical signs, by a higher than normal pH* of the urine, and by noting a thickening of the bladder wall by palpation. This thickening may be shown by a special X-ray technique, and a bacterial culture may be made of the urine.

The owner is usually not aware of urolithiasis in his cat until an occlusion of the urethra, either partial or complete, occurs.

The usual patient that I see is a castrated male. For a day or so, it has been noted that he has made frequent attempts to urinate, but passes little or no urine. He has the appearance of a sick, ill-at-ease cat. On examination, his bladder is found to be moderately to greatly distended.

The first consideration is to empty the bladder. As a rule, this is accomplished as follows: The cat is tranquilized. For this purpose, I administer Sparine (Wyeth). I prefer to give this in the oral form, in a dosage of 50 to 100 mg per ten pounds of body weight (Different cats require different dosages for a given degree of tranquil-

ization, usually, but not always, according to the temperament of the cat.). With a hard to handle cat, it is sometimes necessary to administer this parenterally, in which case the (intramuscular) dosage is 25 to 50 mg per ten pounds of body weight.

If the oral form of tranquilizer is used, its full effect is apparent in one to two hours. If the parenteral form is used, its full effect is apparent in one half to one hour.

This tranquilization makes the cat much easier to handle and usually relaxes the muscles of the urethra sufficiently that the urine can pass, washing out the plug of calculi.

Occasionally with this tranquilization, the cat will urinate voluntarily. Sitting him on his own sandbox or running warm water on his genitals may help him to do this. I use a bulb-type syringe to run water on the genitals.

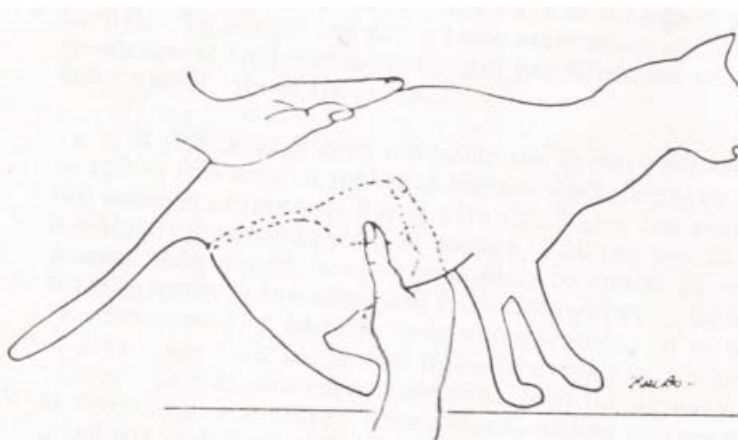
If he does not urinate voluntarily, I try to manually express the urine. To do this, I stand the cat on a table, an assistant holding and managing his front quarters. With one hand on his back on his rear quarters, I steady him and apply downward pressure, putting him in a normal position to urinate, and with the ends of the thumb and two fingers of my other hand, apply gentle up and back pressure on the bladder.

In most cases, the flow of urine is affected, the plug is washed from the urethra, and the bladder is emptied.

A smooth muscle relaxant can be used in place of or, better, in combination with the tranquilizer.

In the event that urinary flow cannot be established as previously described, I attempt to back-flush the plug from the urethra. The equipment needed to do this is a 10 ml syringe and a $\frac{3}{4}$ inch silver lacrimal needle.

If this lacrimal needle is not



Artist Michael Balboa illustrates how to express the bladder. Place one hand on the back of the feline and the other on the rear quarters. With the ends of the thumb and two fingers of the other hand, apply gentle up and back pressure on the bladder.

available, an 18 gauge hypodermic needle, the point filed back to the full circumference of the needle and the end smoothly rounded, may be substituted.

The syringe is filled with warm water, 103°F to 106°F. The penis is manually drawn from the prepuce (foreskin) and the needle is gently inserted into the urethra. The penis is held on the needle by gentle pressure of the thumb and a finger, and the water is gently ejected from the syringe into it. This sometimes will force the plug back into the bladder and allow urination. If the bladder is greatly distended and the walls have lost their tone, it may be necessary to manually express the urine as previously described.

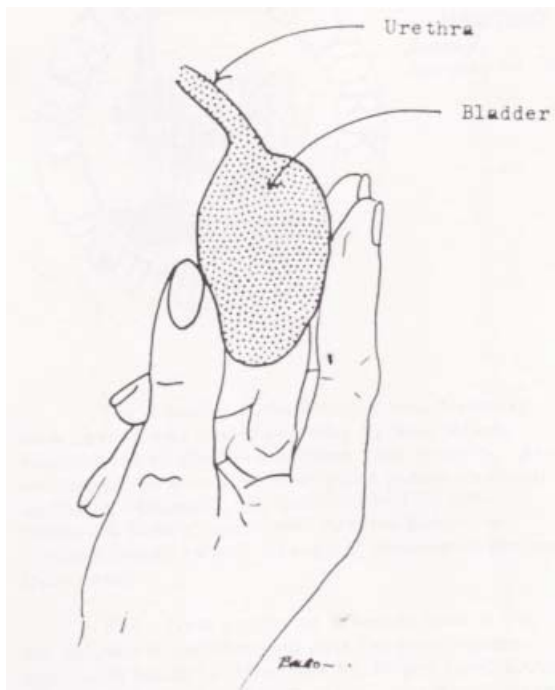
When these procedures fail, I resort to paracentesis vesicae (puncture of the urinary bladder wall). For this, a sterile, 22 gauge (no larger) needle and a three-way syringe are used. The area where the needle is to pierce the skin is shaved, washed, and sterilized as for surgery. The cat is held in a recumbent position (on his back) by an assistant and the needle is inserted near the posterior end of the bladder through the skin and the bladder wall, into the bladder, and the urine is withdrawn. As the bladder empties, the forequarters of the cat may be raised to facilitate removal of most of the urine.

After the urine has been removed and therefore the pressure relieved, the cat may be able to urinate normally, or in the case that the bladder wall has lost its tone, the urine may be manually expressed. If he cannot urinate, all of the above procedures can be repeated before the bladder becomes overly distended again.

I do not like attempting to dislodge the plug from the urethra by use of a whale-bone catheter, a wire loop, capillary tubing, or other catheters. As a rule, further urethral damage is caused by these attempts.

Some practitioners of good repute claim good results dislodging the plug by 'milking' the penis. I have had little success with this method.

Surgery (cystotomy) for removing the calculi from the bladder and establishing a patent urethra, in my opinion, should be performed only as a last resort. If it must be performed, the bladder should be kept emptied for several days by paracentesis



Michael illustrates just how much pressure to apply to a bladder.

vesicae to allow the cat to recover from the uremic condition caused by the stoppage, in order that he be a better surgical risk. I feel the cat with urolithiasis has a much better chance of survival if the conservative regime of treatment is possible and is carried out.

On rare occasions, a plug of calculi may occlude the urethra of a female. In this event, it is removed as follows. If it is necessary, the cat is tranquilized sufficiently that she can be handled. She is held in an upright position. A small catheter is entered into the vagina and the point gently slid along the vaginal floor until it enters the urethra from which the plug is gently pushed back into the bladder. The catheter may be left in place while the bladder empties through it by gravity.

MEDICATION

The medication I have found successful in most cases of urolithiasis, cystitis, and urethritis is as follows. Whether or not a urinary stoppage has occurred, I determine the pH of the urine, which is invariably high (alkaline) except in the rare case of localized urethritis. To acidify the urine, I use ammonium chloride in dosage of approximately 0.1 gm per ten pounds of body weight, three times daily.

If this dosage does not bring the urinary pH down to 5.5 in two days, I increase the dosage to achieve the desired response. Along with this, I give the antibiotic Furadanrin (Eaton) in a dosage of 30 mg per 10 pounds of body weight, three times daily, to inhibit bacterial growth in the urine and the urinary tract. These two drugs may be administered concurrently. It is best to give some food along with these to avoid gastric irritation. This treatment is continued until the urinary pH is down to 5.5. Then I give Mandelamine (Warner-Chilcott) in a dosage of 0.1 gm per ten pounds of body weight, three times daily. This is continued for two or three weeks.

In rare cases where this medication is not effective, it may be necessary to have a bacterial culture and sensitivity test made by a laboratory to determine the antibiotic that will control the bacteria.

Along with this treatment, the cat should be made to drink large amounts of water as outlined in "Prevention." After the treatment is finished, the steps outlined in "Prevention" should be followed. Otherwise, the condition is likely to recur.

ETIOLOGY

I have noted for some years that the pH of the urine of healthy castrated cats is normally around 7.5, and that of intact males is around 6.0. A pH of 7.5 is slightly alkaline and pH 6.0 is in the acid range. It is obvious that an endocrine imbalance brought about by castration affects metabolism in a way to make the urine alkaline.

The salts that precipitate in the urinary tract and form the calculi of urolithiasis are phosphates and carbonates. Acidic urine will hold more of these salts in solution than will alkaline urine. In other words, they precipitate more readily and form calculi in an alkaline urine than they do in an acidic urine.

The irritation of the bladder by these calculi results in cystitis, resulting in undo shedding of particles of tissue from the lining of the bladder walls, more than mucous and inflammatory cells. These particles of tissue, mucous, and inflammatory cells act as cement and hold the calculi together to form a plug in the urethra.

Otherwise, many bacteria grow more

readily in an alkaline than in acidic urine. As they grow, they split the urea, liberating ammonia which makes the urine more alkaline. This favors further growth of the bacteria and greater precipitation of the calculi-forming salts.

Considering these facts, it is evident that alkaline urine predisposes a cat to urolithiasis, cystitis, and urethral stoppage.

PREVENTION

Considering the evidence that castration predisposes a cat to urinary tract difficulties, it is obvious that leaving a male whole would lessen this chance of suffering from these disorders.

Sodium chloride, in the form of table salt or salt tablets, causes the cat to drink more water and, therefore, eliminate more urine. The salts that precipitate from a supersaturated solution and form calculi will not do so if there is a high enough ratio of fluid to salts. Therefore, the more water a cat can be made to drink, the less chance there is for him to develop urolithiasis. Salt, generously sprinkled on his food or given in the form of salt

tablets, will help in the prevention of this condition.

In cats that are prone to the condition, it is advisable to check the pH of the urine weekly. If the urine is alkaline, there is a good chance that calculi are forming in the bladder. If the urine is acidic, probably no calculi are forming, and only existing calculi may be dissolving if the fluid to salts ratio is sufficiently high. Also, the bacteria that are usually associated with urethritis-cystitis do not grow in acidic urine. Considering these points, the urine should be kept acidic, preferably at a pH of 6.0 or lower.

A diet that is high in proteins favors acidic urine, and one low in ash, especially ash that is rich in phosphates and carbonates, favors fewer salts in the urine which precipitate and form calculi.

Supplemental proteins may be given in the form of methionine (marketed by several drug manufacturers), which is an amino acid or "Amino Acids and B12" (Stuart), to help acidify the urine, dosage determined by acidifying effect on urine. With either preparation, one or two tablets per ten pounds of body weight daily, in divided doses, may be tried.

In summary, a large fluid intake and elimination, keeping the urine acidic, and a diet low in phosphate and carbonate ash are the known means of preventing the urolithiasis-cystitis-urethritis syndrome.

*pH is the symbol used to signify hydrogen ion concentration in a solution. That is, it's acidity or alkalinity.

There are a number of means for its determination. Nitrazine paper (Squibb) reads from pH 4.5 to pH 7.5. Hemo-Combistix, Lab_Stix or Uristix (Ames) read from pH 5.0 to pH 9.0. Any of these may be used for determinations of urinary pH. Though the Ames products are of considerably higher cost, they indicate the higher pH values where the Nitrazine Paper does not.

A pH of 7.0 means that the solution is neutral (neither acid nor alkaline). A pH below 7.0 means that a solution is acid. The lower the pH, the greater the acidity of the solution. A pH above 7.0 means that a solution is alkaline. The higher the pH, the greater the alkalinity of the solution.

2019 Wildlife Conservation Expo

By Chris Tromborg

On April 13, 2019, the Wildlife Conservation EXPO was held at Canada College in Redwood City, California.

The EXPO included exhibitors from more than 30 conservation organizations and significant presentations from five wildlife conservation organizations. One of these was Cheetah Conservation Botswana, a significant participant because the Feline Conservation Federation was able to make a \$1,000.00 donation to the research efforts of CCB.

There were several conservation organizations focusing on feline conservation, including Cheetah Conservation Botswana, the Cheetah Conservation Fund, the Snow Leopard Conservancy, Felidae, the Mountain Lion Foundation, and



Dr. Chris Tromborg hands an FCF donation check to a very happy Britz Malepe of Cheetah Conservation Botswana. Photo by Julie McNamara.

of course, the Feline Conservation Federation. The FCF exhibit was located in the center of the feline oriented organizations and adjacent to the exhibit for the Mountain Lion Foundation. I attempted to supervise both exhibits simultaneously, a process made possible with the assistance of MLF member and photographer Julie McNamara; wildlife student and photographer Jessie Campbell at the FCF exhibit; the assistance of MLF legal expert Fred Hull; and perennial mountain lion supporter Dr. Kathryn Klar at the MLF exhibit.

At the FCF exhibit there were informational and educational materials from the Feline Conservation Federation and also Safari West, Jungle Encounters, the Endangered Feline Breeding Center, the Wild Cat Education and Conser-

vation Fund, and the Lyon Therapy Animal Ranch.

The accompanying photographs were

taken by MLF member Julie McNamara and Sacramento City College biology student Jessie Campbell. Feline conservationists will see and hear more from both of them.

On a poignant note, this was possibly the final presentation of the venerable Feline Conservation Federation banner. This year, the organization will hopefully migrate to its new name and more energetic profile as it metamorphoses from the Feline Conservation Federation to become the Feline Conservation Foundation if the proposed Constitutional amendment is passed by the members. Even as the organization's name changes, its fundamental mission to conserve the world's free-living felines and the right to responsibly work for their conservation in captivity will remain.






The Mountain Lion Foundation was next to the FCF table at the EXPO. Photo by Jesse Campbell.



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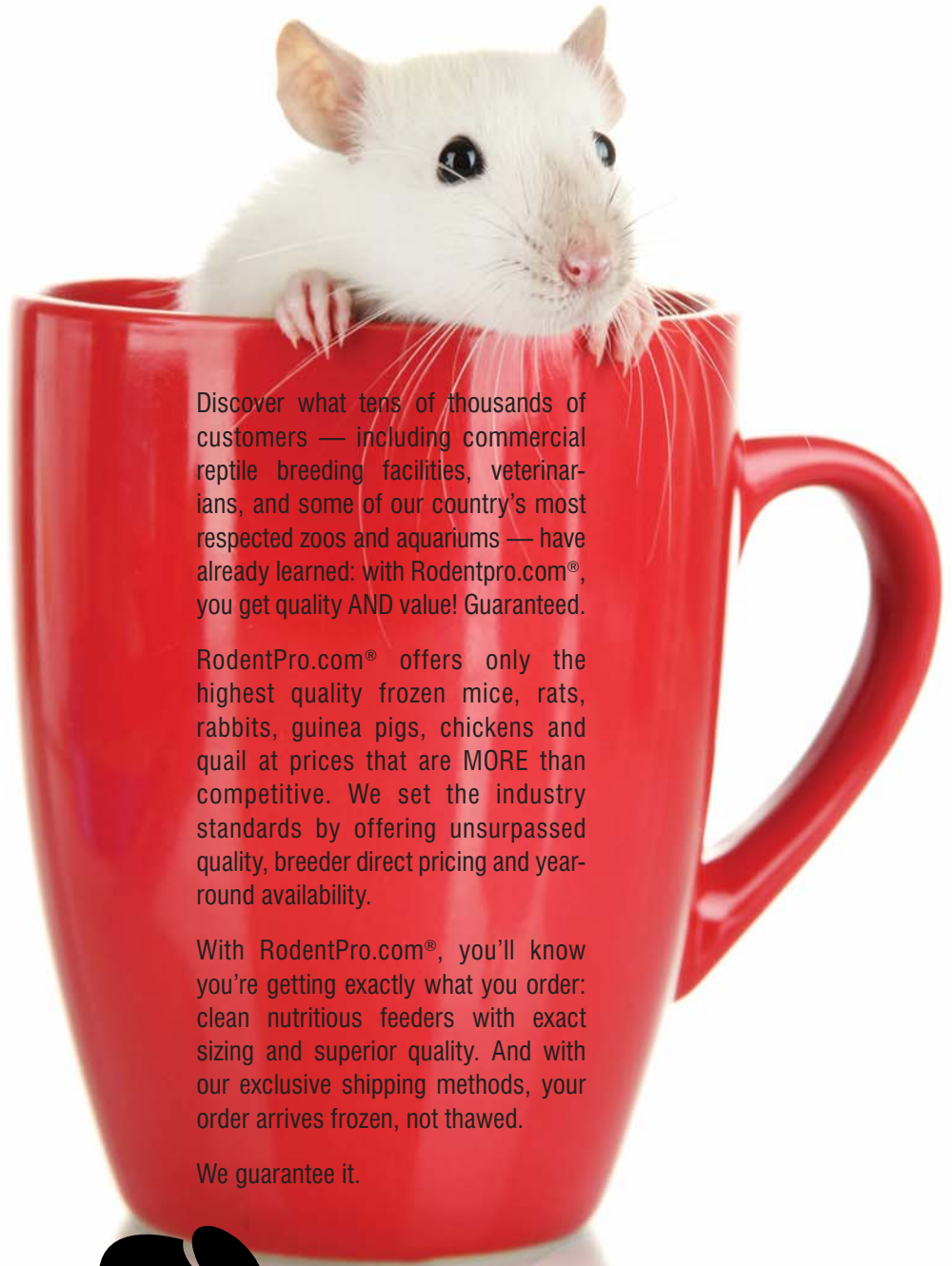
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Book Review: *The Sex Life of Tigers – Ranthambhore Tales* By Valmik Thapar

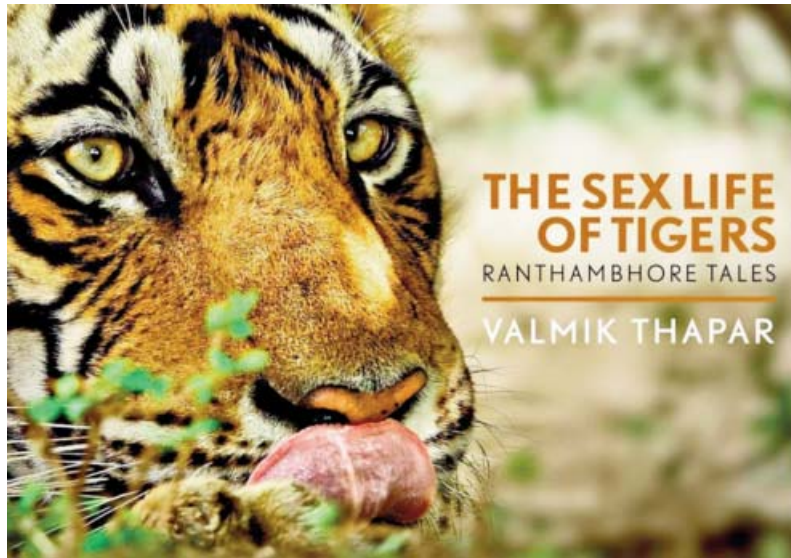
Review by James Godsmark B.Sc.,
B.A., M.Sc.

Department of Animal and Poultry
Science, Ontario Agricultural Col-
lege, University of Guelph

Valmik Thapar is a naturalist and conservationist with more than forty years of experience in wildlife biology and conservation, and is a published author of more than a dozen books, including: *Tiger: The Ultimate Guide* (2004), *The Tiger's Destiny* (1992), and the BBC documentary, "Land of the Tiger" (1997).

In my opinion, his most recent work, *The Sex Life of Tigers – Ranthambhore Tales*, is a more than worthy addition to Mr. Thapar's literary canon. To start with, this book is not necessarily as lurid as one might expect, at least if judging from the first half of the title. While it does indeed offer an uncompromising look at the reproductive behavior and familial social structure of wild-living *Panthera tigris tigris* (including numerous high-quality color photographs), its true value lies in the "Ranthambhore Tales." This is, of course, where Mr. Thapar has always excelled. Thapar himself has self-effacingly said in interviews, that he has never considered himself to be a great writer. But in all fairness, to judge Mr. Thapar by such standards, by the undeniable roughness and unpolished nature of the prose in many of his books, including this one, and as numerous past reviewers have done, is to entirely miss the point. The true value of Valmik Thapar's writing is in his skill at fact-based storytelling, drawing on his lifetime of observations and recollections. Often, his rough and unpolished prose, complete with unique vernacular and occasional grammatical errors, only serves to add to the authenticity of his storytelling. Likewise, he has never been shy about sharing his (often harsh and sometimes alarmist) opinions, such as a statement he made in his previous work, *The Tiger's Destiny*, where he states on the back cover, "The tiger will be extinct by the end of the 20th century, that is in just eight years..."

Obviously, that prediction turned out to be false.



***The Sex Life of Tigers – Ranthambhore Tales* – 2017, SUJÁN ART, New Delhi, ISBN: 978-8192158662 is available through www.amazon.co.uk for £29.99 + shipping (as of the time of writing this review). Also from www.amazon.com for \$106.99.**

However, such statements can be easily excused, especially when one considers that he is quite likely correct, both then and now, on almost everything other than timeline and scale.

From a personal standpoint, and coming from someone who has dedicated most of their life thus far, from my mid-teens onward, towards the fascination with and care and study of non-domestic felids (and especially as someone whose graduate studies were in mammalian reproductive physiology), I cannot help but highly recommend this book. In addition to Mr. Thapar's wealth of direct observation, anecdotes, and detailed histories of several generations of tigers within the Ranthambhore Reserve, the photography contained in this book ranks among some of the best I have ever seen of the reproductive behavior of tigers in their natural habitat. Indeed, I can state quite clearly that it is, by far, the best quality reference material of its sort that I have seen outside of far more dryly-written university textbooks (and nearly all of which rely on observation of captive-based subject animals, rather than wild ones).

With all of that said, some of the stories Mr. Thapar has to tell, in particular his stories about the struggles between males T86 and T95, are at times hard to stomach, at least if one falls prey to judging

things through the lens of human morality. But at the same time, it also serves as a very stark reminder that Mother Nature plays by a very different rulebook than we do. Hence, things that our delicate human sensibilities would view as brutality, things such as a younger male tiger with territorial aspirations, but who is not yet powerful enough to directly displace the older male from his territory,

and who instead searches out and eats the cubs sired by the current territory-holder are, while stomach-churningly brutal to our human morals, actually quite expedient when viewed through the colder and far more calculating lens of survival of the fittest.

The author has never been one to shy away from showing the reader such truths. Yet, at the same time, for all of the harshness, for all of the uncompromising nature of the constant struggle for survival of these magnificent predators, in this book Valmik Thapar also once again quite clearly displays his unique gift for showing the moments of tenderness and genuine affection between these magnificent creatures. In so doing, he also reveals his own lifetime of dedication, wonder, and genuine love for tigers in a way that lets the reader feel it, too. And it is in this very thing where Mr. Thapar's work transcends any limitations or petty quibbles one might have with the technical details or the presentation of the material. Like Major Corbett, like Arjan Singh, and like many others before him, in the end, Mr. Thapar reveals his true reverence for the beauty and nobility of *Panthera tigris*. In so doing, he allows the reader to share in that sense of awe, too.

Rating: 4.5/5

Friends of Laguna Atascosa National Wildlife Refuge

By Dawn Strasser

When most of us think of feline conservation we think of programs outside the United States. There are many great groups here in our own backyard like Friends of Laguna Atascosa National Wildlife Refuge.

FLANWR is a non-profit 501(3)c that works to protect, support, and enhance this national wildlife refuge in Texas. This coastal south refuge is made up of four units that support a wild diversity of species. Among them is the endangered ocelot, with only 50 ocelots left in the U.S. The ocelot's habitat has decreased by an estimated 90%. The FLANWR entered a five-year program with USFWS in 2017, to translocate ocelots from Mexico to Texas. The U.S. ocelots have been facing severe inbreeding caused by such low numbers. This program will allow for a higher genetic diversity. This group is also working to restore habitats, protect existing habitat, increase connectivity across the landscape, and build functional wildlife crossings. They are building relationships with ranchers to support the ocelots on their property.

So now it is early March in Brownsville, Texas, time for the annual Ocelot Conservation festival. I am not from Texas, but a festival for ocelots? Each year, Gladys Porter Zoo hosts a festival inspiring the local community to learn about and become involved in the effort to protect the native ocelot population. Laguna, U.S. Fish and Wildlife, the Cat Ambassador trainers, and Sihil the ambassador ocelot from Cincinnati Zoo all merge for the festival. Most Texans have never seen an ocelot or even know what one is. The festival begins with a 5k run, ocelot themed crafts and, of course, Sihil making guest appearances. She dazzles the group with her ability to climb, and just seeing an ocelot up close and learning how to correctly identify one from a bob-



Sihil is the ocelot ambassador for the Cincinnati Zoo. She travels to the Laguna Atascosa National Wildlife Refuge to help put an "ocelot face" on the annual ocelot conservation festival.

cat is great wildlife education. Sihil even visits the border patrol so they can learn about ocelots and report what they see when working.

This little girl has a busy weekend. She is in fact the "face" of the South Texas scrub habitat. By protecting the ocelot, we are helping to save hundreds of other species of flora and fauna that also share the space. This why they drive 1,200 miles to Texas for a festival. It is a chance to actively participate in a conservation program.

Besides Sihil being an ambassador for ocelots, the trainers have an active role, too. A well-known paper written by K.

Povey and J. Rios (2002) found that the use of ambassador animals accompanied by information delivered by an interpretive presenter holds people's attention over three times longer than presenting information without the presence of an ambassador animal. And people take away more cognitively than just simple observational information. Instead of just recalling that they saw the animal and what that animal was doing, people take away more facts, complex thoughts and feelings, and are possibly even inspired to consider how their life can impact the species by interacting with an ambassador animal! They also noted that people were 20% more likely to seek more information about what they learned if they had the opportunity to encounter an ambassador animal.

With an end goal of informing people, fostering a connection, and inspiring change, studies like this reaffirm that ambassador animals like Sihil make a HUGE impression. (Reference: Povey, K.D. & Rios, J. (2002). Using interpretive animals to deliver affective messages in zoos. *Journal of Interpretation Research*. 7. 19-28.)

We are getting ready for our annual fundraiser, "Cinco de Gato," this weekend for Texas Ocelot Conservation supporting Laguna Atascosa National Wildlife Refuge. This will be our fourth year, and year-to-date we have raised around \$8,400.00. As an FCF member, many of you have the same impact on the groups you speak with. This is no longer about entertainment, but about inspiring others to do more. The FCF's education and conservation committees are hard at work coming up with ideas on how you can be more involved. Be on the lookout for updates or join the education or conservation committee at the upcoming conference, June 14-16, at the Turtle Back Zoo.

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Gatorland's Bobcat Bayou is Bodacious!



Nearly 2,000 square feet and 16 feet tall, there is plenty of room for the felines at Bobcat Bayou.

The shady porch is a perfect hangout for the cats to relax in their beautiful, spacious exhibit that features a recirculating pond, cat walks, and elevated barrel dens.

By Danielle Lucas

Welcome to the Bobcat Bayou at Gatorland Orlando! This beautiful, spacious exhibit has a recirculating pond, cat walks, elevated barrel dens, a large, shaded porch, and all glass front viewing windows. The exhibit mimics a relaxing bayou setting, accommodating all the wants and needs of the felines. This enclosure is 35feet x 35feet x 16 feet

(length x width x height). The material of wire is galvanized and vinyl-coated. Composite wood is used for the decking. Cypress tree trunks and planks are used for the cat walks. This exhibit was originally inspired by our male bobcats and we wanted to keep that real Florida feel within the enclosure while ensuring they have all the essentials within the theme. The keepers spend time every day with the cats offering enrichment, playtime, training and educational talks with the

guests.

This exhibit houses two sets of felines. Each set of cats has their own back-of-house enclosures with shift doors leading onto the exhibit. They are alternated every day on exhibit. One set is a pair of bonded male bobcats (Osceola and Abiaka). The second pair is a female bobcat and a male African serval (Lomasi and Jabari). All four of these felines came to us from different situations, all needing forever homes. We couldn't be happier to offer just that here at Gatorland for these gorgeous cats!



Danielle Lucas with serval Jabari, who rotates time in the Bobcat Bayou habitat at Gatorland.



Bobcats Osceola and Abiaka enjoy splashing in the pond on a hot summer day.

Wild Cat Education and Conservation Fund 2019

The WCECF 2019 Annual Event was held at the Pomeroy Center of the San Francisco Zoo on March 9, 2019. The WCECF, located in Occidental, California, was founded and is currently operated by Rob and Barbara Dicely. The event featured the presence of several well-known feline conservationists, including Jim Sanderson of the Small Cat Alliance, Rodney Jackson of the Snow Leopard Conservancy, Laurie Marker of the Cheetah Conservation Fund, and Ashan Thus-

dagala of Save the Fishing Cat in Sri Lanka.

There were also three cats, including Bhutan, a ten month old snow leopard, Tafari, a four month old cheetah cub, and Bandhu, a one year old fishing cat.



Chris Tromborg poses next to Laurie Marker, who is traveling the U.S. from Namibia, to raise donations for the Cheetah Conservation Fund. Photo by Julie McNamara.



Dr. Jim Sanderson of the Small Cat Alliance speaks about the plight of wild cats around the world. Photo by Julie McNamara.



Bahutan, a yearling snow leopard, made an appearance at the Wild Cat Education and Conservation Fund. Photo by Julie McNamara.

One Cheetah's Fight for Life

FCF Director Chris Tromborg was proud to present a conservation grant check for \$1000, at the Wildlife Conservation Network Spring Expo, to Cheetah Conservation Botswana. This kind of support meets Fish and Wildlife Service species enhancement requirements, one of the requirements to gain an interstate commerce permit. FCF member organization Wildlife and Environmental Conservation has partnered with the FCF to make these yearly donations. If any other organizations or members would like to work with the FCF to meet ESA permit requirements, contact the FCF Board. Below is a note of thanks from Rebecca Klein of CCB.

"All of us at CCB are sending many thanks for the FCF's generous donation through WCN. We are so excited to partner with the FCF to conserve cheetahs in Botswana! With the global cheetah population continuing to decline (only around 7,000 now), the importance of Botswana's cheetahs becomes ever more apparent. With approximately 2,000 individuals, it is the only country where their population remains stable, and through our work we are excited to be able to contribute to this. Thank you for helping us to make that possible!

"Your contributions to our efforts help make these achievements possible and we could not do it without you. Thank you so much for your support! Best wishes and many thanks!"

By Jane Hogan

Everyone loves an underdog. But a cheetah takes the epic battle for survival a

little overboard. As a medium-sized cat, they fall far down the pecking order in terms of the savannah's large carnivores. Their incredible evolutionary adaption for

speed has resulted in a vulnerability in fighting rivals. Their resultant coyness means even the smaller jackals and vultures can scare them away from their food,

and even their own cubs often fall prey to other carnivores. So strong is the competition they face from lions, leopards, and hyenas, that protected areas like national parks hold very little security for them. They are pushed outside of protected areas onto marginal land, often those inhabited by a completely different kind of competitor — the two-legged kind. Where humans and cheetahs mix, there has historically been a wake of human-wildlife conflict. The combination of cheetahs pushed out into farmlands and farmers not adapting their farming practices have forced cheetahs to the edge of extinction. Half of the world's cheetahs have been lost in the 18 years since the turn of the last century. At this rate, we will be set to lose the entire species within our children's lifetimes.

There are ways that help farmers and cheetah to coexist in the same landscape; the fight now is to get more of these techniques out to more places and to reach more farmers. Cheetah Conservation Botswana (CCB) has been winning battles all over the cheetah's last stronghold — the Kalahari. By assisting farming communities to develop adaptive methods to protect their livestock, CCB has been able to help people farm alongside cheetahs and other carnivores without losing livestock. CCB has instigated a livestock guarding dog program that trains and places locally-sourced mixed breed dogs to protect livestock herds from carnivores. Since 2013, they have been able to place over 130 dogs with farmers suffering conflict with cheetahs — the majority of

which now coexist happily with carnivores without any threat to their herds. Farmers' networks have been established to help farmers circulate ideas on how to manage problems with carnivores in non-lethal ways. CCB is encouraging them to pick up their thinking caps to prevent depredation rather than picking up their guns. This year, one very special cat has allowed CCB to discover a new technique to help alleviate farmer-cheetah conflict — and it was something that we really weren't expecting.

For years, CCB has been using satellite collars to feed us information about habitat use by cheetahs, daily movement patterns, hunting behaviors, territory overlaps, running speeds, and a wide variety of other behavioral information. It wasn't until a female cheetah in Ghanzi was collared in January 2019, that we realized the power that a satellite collar can have in saving a cheetah's life. We were called to a farm by the Department of Wildlife and National Parks to assist with a cheetah that had been caught accidentally in a leopard trap. We fitted her with one of our tracking collars and began monitoring her movements immediately after she was released into the nearby Central Kalahari Game Reserve.

It seems like a fairly standard story really. We have collared and relocated over 20 cheetahs in the history of CCB, though with low survival rates and perpetuating conflict levels on the source farms, it is not a tool we regard as effective in saving the lives of cheetahs in this tumultuous landscape. This particular scenario had two important differences however. Firstly, on collaring the cheetah, our staff along with the farmer decided to name her Alida, after the farm owner's

daughter. Then, when her GPS points started arriving via satellite, our research team not only filed them into our databases, but they also mapped the points and sent them to the farm owner twice a week. So when Alida went on an epic voyage across the north-eastern corner of the Central Kalahari Game Reserve, the farmer and his family were watching with interest



Cheetahs are the fastest land mammals, but, like all cats, when they aren't hunting, they like to conserve their energy relaxing in the heat of the day.

at the same time we were. When she ventured across the reserve boundary and into the farms along the northern edge of the reserve, the farmer also held his breath to see if she would survive the risky landscape. By the time she made the elongated loop back toward his farm, the farmer and his entire family was completely invested emotionally in the chances of survival she was now facing by moving through the same farming area where she was first caught. Contrary to our initial concerns that she would be shot if she returned to the place where she was captured, the opposite actually occurred. So attached had this family become to their cheetah Alida that the farm owner even said he would tolerate her eating a few of his calves if she needed to.

The importance of research is clear by involving farmers and going through a real-time sharing of data, we can help change perceptions about these threatened cats. By illuminating the hidden struggles of these tough cats, we were able to create sympathy with this species that had rarely existed before. By sharing the struggles that this one cat faced, we have helped one farmer to understand that we are all just doing our best to survive in this world.



By collaring cheetahs, valuable information is gathered that help improve the conservation of this endangered big cat.

Exotic Animal-Friendly Liz Felton Announces Her Run for Congress to Represent Florida's 21st District

By Liz Felton

I was born in Hempstead Long Island, the eighth of nine children to Christa and James Hatton. My mother came from Germany at 11 years old, and my parents met at 16. My father joined the Navy at 18, where he learned the skills needed to be an electronics technician. He attended college for a couple of semesters, but the demands of work, school, and family were impossible to balance. He opted to self-educate. Deriving knowledge from books he picked up at Barnes and Noble, he proved himself worthy of later positions employed as a technical specialist who successfully acquired patents. My mother attended college while raising a family and received her RN degree. Both instilled a love of God, family, and country in their nine children.

I was "late to launch." ADHD and dyslexia were not commonly diagnosed in my generation, and the feelings of shame that went along with failing grades stunted my emotional growth. I was quite immature in my twenties. Having found myself pregnant at 20, I applied for social assistance. While it met the day-to-day basic needs, there was little room to excel or thrive within the program. I can see how people feel "stuck" there.

I met my first husband in my mid-twenties, had my second and third child, and we separated shortly thereafter. I was working on my bachelor's in psychology in my junior year at Stony Brook University on Long Island. I picked up a few different jobs. The demands of work, school, and raising children proved too difficult to handle and I left school, determined not to become stuck in the system again. I stepped far outside my comfort zone and, at the age of 30, walked into a night club to apply for employment.

I met my second husband in my early 40s and really got out of my "box" when I stopped being the man in my own life and trusted him in a more traditional role as bread winner. He is the best friend I've ever had

and I am grateful every day for his love and support.

Over the years, I had the opportunity to work with, volunteer with, and own a variety of exotic animals. The real life education in daily husbandry connected



Liz with one of her lemurs, Bindi Mu.

me to the plight of their wild counterparts. A few years ago, a friend suggested I open my own captive wildlife educational program and "Safari Bob's" was born.

A recent piece of legislation backed by an anti-animal ownership (special interest) group prompted a call to my current repre-

sentative. I did express my concerns to a staff member that the bill would have a negative impact on captive wildlife and business owners such as me. I still have not received a response as to my representative's position. However, she has a 100% rating from the special interest group driving the bill. When I realized she ran unopposed last election, I decided to throw my hat in the ring.

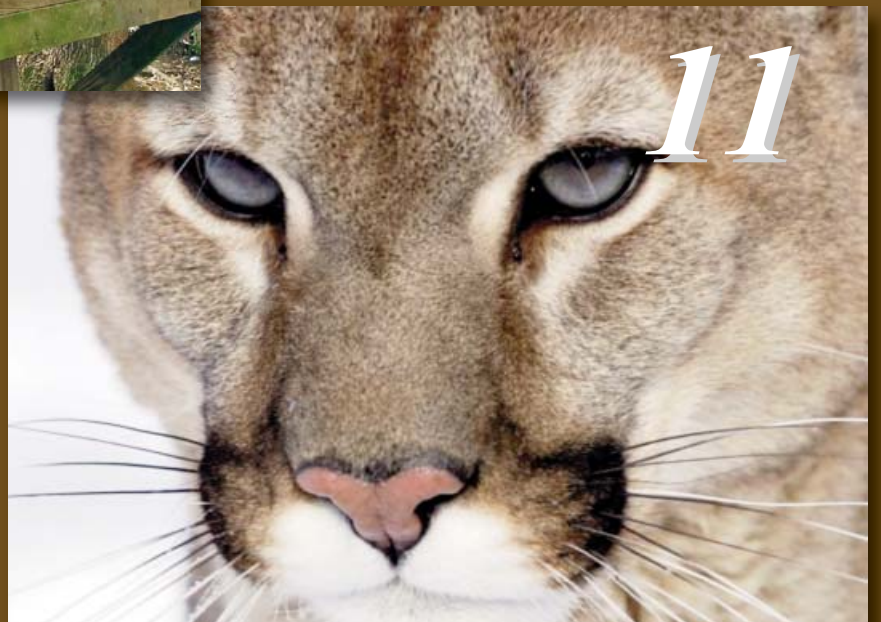
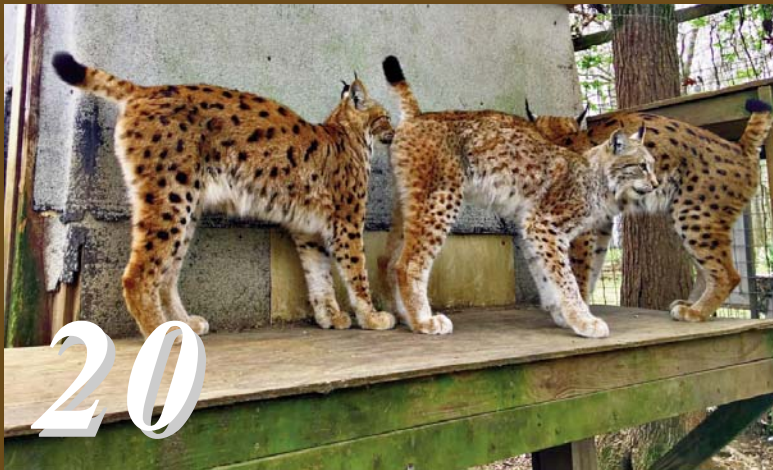
I have lived through a variety of economic circumstances, including abundance and resorting to looking under the couch cushions for lost change. I have been without a home, although I am grateful to have never slept without a roof over my head. I am able to empathize with someone who has little to nothing, as well as someone who has worked very hard, succeeded, and feels they are having what they've earned picked apart for politicians to spend on things with which they don't agree. I don't want to spend my life in politics. I would, however, like to get in, effect some change, and "vote myself out" with term limits. I don't know everything, but I can learn anything. I'm a critical thinker who does not believe that a strong stance on one position solidifies a stance on all others. I have a great deal of respect for personal freedoms and personal belief systems and support people to express both so long as that expression does not quash the

rights of others. I am happy to engage in an exchange of ideas with people who hold different views than my own, and I have on occasion changed my own views because I openly listened and saw something from a different perspective. I am not a polished politician. I think we need

less of that in terms of representation. If elected, I would like my constituents to think of me as a representative to whom they can bring their ideas, thoughts, and beliefs without worrying if the party I belong to aligns with theirs. I'd want them to feel comfortable contacting me with concerns. I'd like them to think of me as their neighbor in Washington.

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Feline Conservation Federation

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The mission of the FCF is to support the conservation of wild felids by advocating for qualified individuals to own and to pursue husbandry of wild felines, providing expertise and material support to ensure the continued welfare and viability of these populations, contributing to research, and funding protection programs that benefit felids living in nature.

Front Cover: Minnow the fishing cat lives up to his name. He resides at Panther Ridge Conservation Center in Wellington, Florida. Photo by Kandice Seitz.

Back Cover: Bobby McGhee, intern at Bear Creek Feline Center in Panama City, Florida, took this selfie while scratching Thatcher the cougar. Bobby works with the cats, providing enrichment, and is also a great maintenance and repair person, both skills which are greatly appreciated after Hurricane Michael damaged the facility.

