Ocelots Web-based Presentation
When: Thursday, July 9, 2020 6:30-7:00 pm
Who: Kim Gray

What: SDZG's Herpetology Field Conservation Programs and Tools Used to Save Species

In This Issue
A Note From The Head Ocelot . . . . . . . . . . . . . . . . . . 2
Mark Your Calendars . . . . . . . . . . . . . . . . . . . . . . . 3
A Review of Our May 7 Webinar . . . . . . . . . . . . . . . 4
A Review of Our May 20 Polar Bear Webinar . . . . . . . . 6
Grants Program and Other Great Updates . . . . . . . . . 10
About the Ocelots. . . . . . . . . . . . . . . . . . . . . . . . . 15

Our Mission
The Ocelots enthusiastically support the efforts of the Zoological Society of San Diego through active involvement, commitment to education, and fund-raising.
A Note From The Head Ocelot

By Kim Bidermann
Head Ocelot

I am so proud to be your Head Ocelot this year! Our first shout out for help for Australian wildfire affected animal was met with a “stuffing of the pouch” with money. Almost immediately after that SDZG and the rest of us were shut down. And during this shutdown Ocelot members have met two $10,000.00 challenge grants for the critical needs campaign. And finally, over 250 masks have been made and donated for use by SDZG personnel and RITZ.

We have had two webinars and have another planned for July. When our Advise-a-Lot shares inside information we email it out to keep you in the know.

September 12 is RITZ, which is totally virtual this year, so if you are able to help out more check out the items available to bid on.

Again, I say I am so proud to be your Head Ocelot! Every time we put out the call you answered. Be proud of yourselves, too.

The greatness of a nation and its moral progress can be judged by the way its animals are treated.

Mahatma Gandhi

Kim Bidermann
Mark Your Calendars

You won’t want to miss a single Ocelots event this year!

July 9: Kim Gray: Special Programs and SCZG Conservati. web-based presentation

Please note:
The Ocelot schedule is currently in flux. In the midst of the Corona Virus crisis we are unsure as to when we will be able to resume our scheduled activities. As soon as San Diego Zoo Global is able to let us know when we will be able to we will schedule and resume our great dinners, special events, and presentations. Please know that your Steering Committee is working to get things back to normal as soon as possible.

Please note that these dates, venues, speakers, and topics are tentative and are subject to change. There is construction scheduled for the Children’s Zoo and our access to the Zoo Party Area (ZPA) may be affected. Our speakers are staff members of SDZG and their schedules may change necessitating a change in our programs.

Contribute to the Oceletter!

We invite you to submit articles and photographs for the Oceletter.

All content should be submitted electronically to the Oceletter Editor, Paul Brooks, at pbrooksphotos@hotmail.com.

Contact Us

The best way to reach a member of the Steering Committee is to use the following e-mail address: sdzgocelets@gmail.com

This e-mail account is monitored frequently, and questions can be routed to the member of the Steering Committee who should handle them.

The following people can be reached directly:
Kim Bidermann—Head Ocelot (619) 233-7600 kimbidermann.com
Theresa Low—Grants/Logo Wear (858) 391-8616 lowtm@earthlink.net
Paul Brooks—Oceletter Editor (619) 889-9051 pbrooksphotos@hotmail.com
A REVIEW OF OUR MAY 7 WEBINAR

On May 7 Ocelots premiered our first webinar, designed to keep members informed of SDZG conservation projects while we’re safer at home. Kim Bidermann welcomed viewers, sent out a thank you to health care workers and first responders during this time of crisis, and asked for a moment of silence for those who have died or are fighting for their lives from Covid-19.

Theresa Low updated members on the Critical Needs Campaign $10,000 challenge offered by a generous member. At the time of the webinar members had additionally donated over 200 washable masks for use by essential Zoo staff. She shared thanks from staff for grants to the okapi, Avian Propagation Program, and the Fiji Iguana Conservation Project.

Helene Hoffman introduced Amanda Lussier, senior wildlife care specialist at the San Diego Zoo Safari Park (SDZSP), who presented “Bounding Back from the Brink: Bighorn Sheep of the Peninsular Ranges.”

Bighorn sheep can be separated into three distinct subspecies based on genetic and morphological differences: Rocky Mountain, Sierra Nevada, and Desert Bighorn. While the sub-species in the Rocky Mountains are larger with thicker coats for the cooler climate, the desert bighorn, the focus of Amanda’s work, are smaller and sleeker in those drier regions. Following a population decline from about 1,100 in the 1970s, the peninsular bighorn sheep were federally listed as endangered in 1998. The population has increased from about 400 in 2000 to about 900 today.

The peninsular bighorn sheep range stretches from Riverside County into Baja, Mexico. Their recovery regions are comprised of nine study populations forming a metapopulation, which means a group of spatially separated populations of a species that interact at some level. There are eight separate ewe groups within their range, each with a dominant matriarch. At about a year of age, males will leave the maternal group, and infrequently there is female dispersal. Rams may live in bachelor groups or solitarily, and will fight for access to the females during the breeding season late summer to fall. These males bring new genetic material into the herd.

The biggest threat to the bighorn sheep population is habitat loss due to development and human encroachment into wildlife areas. Interstate highways, fencing, walls, solar farms, and vehicle collision are barriers to movement. Disease from domestic livestock is another threat from human encroachment. Bighorn sheep are prone to respiratory disorders. Predators such as coyotes, bobcats, and mountain lions are a natural threat, especially for the lambs.

San Diego Zoo Global has worked for bighorn sheep conservation through the mammal department at the Safari Park, community science program participation, and research at the Institute for Conservation Research. The habitat at Condor Ridge (SDZSP) houses six females, some expecting lambs to add to the total of about 80 lambs born at the park. The males are visible from the Africa Tram tour or an up close cart tour. Based on Species Survival Plan recommendations a female approved for breeding is introduced to a male for a couple of months in the fall, and then removed when lambing begins, mirroring the herd structure of their wild counterparts. A healthy population in managed care provides a safeguard for the wild population, and guest interactions with the species builds a connection to wildlife and promotes environmental stewardship. Although SDZG has not reintroduced sheep to the wild, other institutions have done so.
SDZG participates in two citizen science projects, the first of which is the Annual Bighorn Sheep Count, held in Anza-Borrego State Park for four days over the July 4th weekend. For 49 years volunteers have stationed themselves at permanent waterhole sites which are closed to park visitors at that time of year. For the last 20 years those volunteers have included members of the SDZSP mammal department. Volunteers spend 10 hours a day scanning the hills to document the numbers. Some volunteers choose sites within easy walking distance and can then return to their hotel nightly, while others backpack to remote sites. It is extremely hot in the desert in July, but an accurate tally is typically ensured because enough time has passed since lambing season when mortality is most likely to occur and the sheep need to drink at least once over a three-day period that time of year.

Last year there was a smaller count because the lambing areas still had water and the herds didn’t need to leave. The total count in Anza-Borrego State Park was 273, comprised of 110 ewes, 47 lambs, 21 yearlings, and 86 rams. The remaining nine individuals’ gender/age couldn’t be identified. The count will continue this summer for the 50th year. Due to coronavirus concerns the project is not accepting new volunteers as there is no mechanism for training, but the Anza Borrego Foundation (https://theabf.org/) provides updates on this and their other citizen science projects.

The second citizen science project SDZG staff participates in is the Anza Borrego Guzzler monitoring, performed by both participants of the annual count and mammal department staff. Ten guzzlers, or water reservoirs, are maintained in areas of seasonal migration or where natural water resources dry up. Rainwater collectors made of tarps collect the water which is then piped into large water tanks. These cisterns have a one-foot square drinker that must be periodically cleaned and monitored for proper operation. Camera traps have been placed near the guzzlers. Amanda said that in the three years of her project, with all the miles of hiking, she has never seen an animal except the occasional jackrabbit. Camera images showed a ram visiting one of the guzzlers in October, and on another day three females, one of which was wearing a tag. Other wildlife spotted on the footage was a kit fox that showed up frequently to mark the area, a spotted skunk, a bobcat, and a North American ringtail (sometimes referred to as a ringtail cat). Through this project and the annual bighorn sheep count, the SDZSP mammal department staff have volunteered over 2700 hours of personal time dedicated to wildlife conservation research.

The Ocelots have been supporters of the bighorn sheep with the donation of a camera trap used in their Safari Park habitat to collect data to guide best management of the herd. It was placed in the catch pen to monitor overnight access to feed and activity patterns to ensure that all the ewes had access to that food, since there is a herd hierarchy. Beamer, at 18 the oldest female in AZA facilities, was observed eating more in the evening than the morning, so the wildlife care specialists knew that her dietary needs were being met.

If you missed the live broadcast of this webinar, it has been archived and you can watch it at the following link. The presentation begins at the 3:19 minute mark.
https://sdzg-my.sharepoint.com/:v:/g/personal/mhammock_sandiegozoo_org/EUnV SaSNPmRCnplIl3LE3M0BunQtN21aB Pi4K7W0C7IuQ?e=DZffOQ
A Review of Our May 20 Polar Bear Webinar

Ocelots had our second opportunity to remotely connect to the Zoo on May 20th with “The San Diego Zoo Polar Bears-A Special Inside Look for the Ocelots,” presented by Advisalot Sara Weiner and Senior Polar Bear Care Specialist Nathan (Nate) Wagner.

Helene Hoffman provided an introduction to the Polar Bear Plunge’s three residents. Chinook is a 25-year-old female. She was found orphaned in Manitoba, Canada and arrived at the Zoo in 1996. At approximately 660 pounds and six feet tall she is somewhat dominant in the habitat. Kalluk, a 19 year old male, was orphaned in Alaska when his radio-collared mother was killed. He is the largest of the three bears at 1200 pounds and stands about 10 feet tall. He arrived at the Zoo at the age of 2 months in 2001, weighing just 12 pounds. Tatqiq, his twin sister, weighed only 10 pounds at the time of arrival. Weighing in at about 600 pounds and six feet tall, she is sometimes referred to as “The Princess.”

Prior to the presentation Nate had taken Sara’s phone behind the scenes to record a quick tour of the polar bear habitat. We got to see the video screens that show images of 24-hour video camera observation of the bears, that the wildlife care specialists use to determine the effectiveness of their care. Although the food storage and preparation areas are directly open to staff, Nate panned the camera into several areas through the heavy protective metal mesh that separates the people from the bears. We saw the indoor saltwater pool (saltwater helps to reduce algae build-up in the bears’ hair), the backyard area, the head crate on the bedroom wire grating (used when attaching a radio collar to the bear for research data collection), and the fire hose bed like we see in many animals’ bedrooms.

Sara and Nate met us by the glass viewing area where we could see Kalluk tugging on a 35 pound lamb carcass attached at the water’s edge, while Tatqiq and Chinook concentrated on catching the 11 black bass, both food items that were Ocelots grants in 2019. Chinook often caches her fish in the manufactured snow, and goes back later to finish eating them if Kalluk doesn’t get to them. He’ll spend all of one day and the next morning on the carcass.

Much of Nate’s discourse was answering viewer questions. The questions and answers follow.
Q: What about the egrets and herons we see in the habitat?
A: These birds are typically migratory, but will hang out year-round when there are resources available. Wildlife care specialists put out a little extra food for the egrets, herons, and crows so that their share doesn’t affect the bears’ diet. Typically the bears ignore them.

Q: Have you noticed a change in behavior since the zoo closed?
A: No, there doesn’t seem to be a behavior change and the bears continue to use their entire habitat, both inside and out.
Q: How did they learn to catch fish?
A: Polar bears don’t hunt fish in the wild, so in managed care where live fish enrichment is offered the technique varies from zoo to zoo. Chinook corrals her fish into a corner of the pool or over a filtration unit.

Q: How much do they eat a day?
A: The females are given about five to six pounds inside their bedroom, and then an additional five to ten pounds free-fed throughout the habitat. Kalluk is given as much as he wants.

Q: Do they eat the bones we sometimes see in the habitat?
A: No.

Q: What is the water temperature?
A: It typically runs between 55-60°, but sometimes a little warmer in the summer. If the air is very cold it could drop below 50°. Given the low fat dietary adjustment for the San Diego climate, that is sufficient for the bears’ comfort along with other environmental factors such as shade, snow machines, and air-conditioned inside areas.

Q: How often do they get fish/carcasses?
A: They get fish monthly and a carcass every three weeks. The girls love the fish, and will typically eat them tail to head and cache any remainder in the snow. They don’t like lamb, but Kalluk loves it. In the wild bears spend hours or days processing their food, so providing an opportunity for zoo animals to process their diet can reduce problematic behaviors.

Q: Has our male fathered any offspring?
A: Kalluk DNA is represented in the Frozen Zoo. To date artificial insemination is not successful in polar bears.

Q: Why does Tatqiq have a black paint spot on her side?
A: It is known that in the wild stress and toxin levels can affect hair growth. Researchers will be able to compare the data on hair growth collected from well-fed, unstressed zoo bears with that of wild bears, to help in determining how to work for conservation of that species.

Cont. on next page
Q: Why is Chinook smelling the air after she catches a fish?
A: Smell is the most important sense for polar bears. This has been used to the wildlife care specialists’ advantage because sensory indicators can be used for enriching experiences. By linking certain scents (not always specific to the arctic environment) to upcoming food availability, staff can reduce stress related anticipatory behavior because the environment “tells” the bears what to expect. So a lemon scent means that tomorrow there will be rabbits, and an almond scent means tomorrow there will be eggs. Just like in the wild the scent of other predators might indicate a carcass lies beyond the horizon.

Q: What is their favorite food?
A: As an apex predator, you’d expect it to be meat, and Kalluk will work on that lamb carcass all day long and again in the morning. But his favorite food is Romaine lettuce. The girls like beets and the weekly beef shank. Since all three bears get fed a portion of their diet individually, having food in the common areas might entail some social negotiation which is just healthy competition.

Q: What about the pacing behavior?
A: Reducing pacing behavior is a top priority. You may have noticed that the zoo no longer has a nursery, because best practice is to use assisted rearing with youngsters who can’t be raised by a parent, so that they learn appropriate responses to life situations. When Tatqiq and Kalluk came to the zoo they had to be hand-reared. They couldn’t learn the complex behaviors to respond to seasonal or hormonal changes they would have learned from a mother in their native habitat. So for example, during breeding season a male would be hunting for a mate in the wild, while in a zoo setting that might be expressed in stereotypical behavior such as pacing or repetitive actions. To address these behaviors, the wildlife care specialists provide enriching experiences, linking those experiences into a story by providing seasonal enrichment. Increased engagement in the environment, such as caching food and linking scent to resources, has shown to reduce stereotypical behavior. The polar bear care specialists are three years into this program, and by analyzing video footage they have been able to map out the bear behaviors that indicate they are engaged in activities better for their psychological health. (For more detail on the practice of enrichment refer to the April Oceletter of this year.)
Q: Why aren’t our bears white?

A: Guests have asked if they’re really polar bears because they don’t always look white. Our bears have a variety of substrates to interact with so sometimes they look like brown bears. Tatqiq has green hair a part of the year. Polar bear hair is hollow, and the ends break off through normal bear activity. When Tatqiq swims in the fresh water and then sunbathes (a favorite activity for her year-round), she develops a harmless algae bloom in the hair shaft. Polar bear hair is actually clear. The white is an optical illusion created by the reflection of the light spectrum visible to human eyes. Infrared light passes through the hair to the black skin, which helps to keep polar bears warm.

Q: How many wildlife care specialists work with the polar bears.

A: Nate works with the bears five days a week, and Becky Wolf is the lead polar bear care specialist on the weekends. Although there is usually overlapping with staff in this area, there has been very little during the coronavirus outbreak.
As of this submission, the Safari Park and Zoo remain closed to guests. However, Ocelots remain connected and supportive of the staff and care of the plants and animals we have known and loved for so many years. Here are several good examples of Ocelots recent achievements.

On April 16th an anonymous Ocelots member offered to match $10,000 raised by Ocelots in support of San Diego Zoo Global’s Critical Needs Campaign. With an easy and secure link to donate, Ocelots gave quickly and generously to meet not one $10,000 challenge, but two $10,000 challenges in a 5-week time frame! To date, Ocelots have contributed more than $42,000 to supporting wildlife in SDZG’s care. Thank you to both anonymous challengers and members for your gifts. The Ocelots link supporting the Critical Needs Campaign will remain active should you choose to make a gift.

Ocelots received a request on April 30th for washable face masks for SDZG staff. Twenty Ocelots members, their families, and neighbors, jumped in to help answer the call. From a talented sewing team to those willing to shop, pick up, and visit local mailing stores, Ocelots have delivered 230 masks to staff at the Institute, Park and Zoo. In addition to the face masks for the staff, 30 face masks have been included in the SDZG R*I*T*Z online silent auction! The auction runs September 12. To participate in the auction, please visit ritz.sandiegozoo.org.

Cont. on next page
The animal care teams remain committed to providing world-class care while adjusting to modified work schedules to support a safe and healthy work environment. We have received a few updates and some fantastic photos to share of grants in action around the Zoo. Their messages of gratitude always include “we miss seeing all of you!”

Feeding Okapi

Also known as the “forest giraffe”, okapi Subira, Elombe and Mosi at the Zoo’s Ituri Forest are doing well! Like giraffe, okapi use their long, dark blue, prehensile tongue to pull leaves off branches, more lower branches of course!

This hanging feeder provides an opportunity to offer part of their daily diet, including alfalfa hay, in a way that supports their natural behavior. If you have enjoyed a feeding opportunity with these beautiful creatures, you know the strength of their tongues! With their upright ears pointed in all directions, they will be one of the first animals to hear our footsteps and voices when the gates finally open to guests.
Avian Propagation Center

What is the Avian Propagation Center (APC), you may ask? This incredibly special off-exhibit center hatches, raises, and cares for endangered and delicate species of birds that need a little extra TLC or need more offspring raised to increase populations with low numbers. The care team is so grateful for the many years of support Ocelots have given. They are among the first each year to request “golden ticket” stickers that read “This item was made possible through the generosity of the Ocelots.” The APC team provided several updates and photos to share.

- The Avey Chick Chalet, houses babies for the first days to weeks of life, keeping a constant temperature and humidity level to simulate parental care. Pictured here are two 20-day old African pygmy falcon chicks that are being hand-reared due to the momma not being quite ready for her parental duties. Until we are able visit the African pygmy falcon ambassadors at the Park and Zoo, check out the recent photos of these two chicks! Update: the two African pygmy falcons, both male, have fledged and are big birds! They have been moved from the brooder room to a bigger run. In the updated photo, birds are 2-3 months old.

- Lead wildlife care specialist, Beau, is holding a Brinsea portable brooder, which can be used for egg transport. The APC team will try raising sunbird chicks in this small unit. There are two species of sunbirds at the Zoo, with the Splendid Sunbirds being visible in their habitat at the Africa Rocks aviary. Hand-rearing sunbird chicks is quite the feat, with few institutions even housing these unique birds. They hatch out at about 0.60-0.75 grams and as you can imagine, this species takes incredible patience and expertise to care for successfully. Inside the brooder are hand-rearing puppets, not sunbird chicks! Please note, photographs were taken prior to March 2020; face coverings were not required at that time. Update: due to COVID-19 and limited staffing, the team has been hand-raising less frequently this season and opted to parent-rear more if possible. So, the sunbirds have been sitting on their own eggs!
Welcome to the beautiful walk-in greenhouse, a 2018 grant award! The APC team is now able to grow much of their own enrichment for the birds, especially during the winter.

- In one fall-winter season the team has grown: purple beans, peas, zinnias, snapdragons, dragon fruit, beets, marigolds, long-leaf Ficus, and strawberries. Zinnias seem to grow taller in this greenhouse as seen in the photo. The blue-crowned lorikeet chicks enjoy the zinnias, they love fresh pollen! Having a continuous supply of flowers to offer the birds is such a treat.

- The team provides fresh flowers as enrichment for nectar drinkers from flowers grown inside the new greenhouse, too. The APC is housing many nectar drinkers that are waiting patiently in holding habitats until the new hummingbird habitat is ready for them.

- What’s more perfect than a corn patch in the summer? Every part of the corn plant – stalk, leaves, husk, corn ears – can be used for enrichment. Besides fresh corn, the kernels can be dried and then popped for the parrots. How awesome is that? The APC team was able to do this because of the greenhouse.

And last but not least, attached is a BONUS photo of a darling 30-day old Andean cock-of-the-rock chick.

“Thank you, Ocelots! With your generosity and shared vision, we are able to enrich the lives of the amazing species we have here and continue on our mission to ending extinction for species of birds around the world. With gratitude, Lauren (APC team)”
Ficus for Fiji Iguana

Ocelots are helping to save the Fiji Iguana, found on just 10-percent of Fiji’s 300 islands.

The Zoo’s Herpetology Department maintains the largest and most successful colony of this endangered species outside of Fiji, and currently manages the Fiji Banded Iguana Species Survival Program (SSP). You can read more about conservation efforts at https://institute.sandiegozoo.org/species/fiji-iguana.

The on-site Fiji iguana breeding habitat is located inside the Zoo’s Reptile House. When the Zoo opens, you can admire a gorgeous male in his habitat on the backside of the Reptile House. Ocelots grant awards have provided a variety of artificial Ficus trees for several years. The artificial Ficus are easy to maintain, no watering required and can easily be sanitized and returned to the habitats. So far, there have been 9 births this year! The latest clutch to hatch in March/April was two males and one female. They grow up so fast! You may be able to see the color bands developing on the tail of the iguana in their group photo. These are 4 of the 5 born in January/February.

From wildlife care specialist Rachael, “We have a robust breeding program but have had a hard time being able to replace all their plants. Artificial plants work best, and we found these Ficus trees are perfect. They allow the Fijis to bask more normally, spreading out on small branches with cover rather than having to feel exposed on a larger branch. Our Fijis are enjoying and exploring their upgraded habitats and our caretakers are so thankful!”

Until we meet again, stay connected and stay well.
About the Ocelots

Ocelots enjoy a special relationship with San Diego Zoo Global. While having fun at many educational dinners and other special events at the San Diego Zoo and Safari Park, Ocelots raise money to support the Ocelots Grants Program. Departments within the San Diego Zoo, Safari Park, and Institute for Conservation Research as well as conservation programs throughout SDZG are eligible to apply for these grants.

Diego, the ocelot, pictured above, was purchased for the San Diego Zoo by the Ocelots in 2005. Diego is a working member of the Education Department!

Dafyd, the ocelot, pictured above, lived at the San Diego Zoo Safari Park in an enclosure funded by the Ocelots in 2011.