Monitoring the Survival of Grand Canyon’s Desert Bighorn

Keep Wildlife Wild

Birding with a Purpose

Grand Canyon Bats
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You can make a difference at Grand Canyon! Memberships are available beginning at $35 annually. To obtain more information about GCA or become a member, please visit our website at www.grandcanyon.org.

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FROM THE EXECUTIVE DIRECTOR

The Wonders of Wildlife

One of the most amazing things about living and working at Grand Canyon National Park is sharing our home with a vast array of wildlife. Grand Canyon is habitat for a diverse population of birds, reptiles, fish and mammals. As you walk along the rim, you may spot some of the more commonly seen animals such as an Abert’s squirrel, mule deer and elk. A visit to the inner canyon or Colorado River provides the opportunity to see species that are hidden from the more casual visitor. If you are lucky enough to spend time hiking into the inner canyon or rafting down the river, wildlife sightings increase as you encounter the wide range of species living below the rim.

Bighorn sheep are one of these special and treasured species. These magnificent animals are elusive to most visitors because they dwell below the rim—the majority of the population stays by the river, and their habitat spans its length. When you see bighorn, they are often in small groups. During the spring it’s not uncommon to see a mother nursing or protecting her lambs on cliffs along the river. These extraordinary sightings remind us of the life that prospers in the rugged Grand Canyon wilderness.

In this issue you’ll learn about the delicate balance of the Grand Canyon bighorn sheep population and how park biologists are focusing on the species’ fragile nature so they can ensure bighorn longevity.

Your support allows park biologists to study the wildlife that make Grand Canyon their home. The valuable knowledge gained from wildlife research is the foundation for protection and preservation of Grand Canyon’s vast and complex ecosystem. Thank you!

Susan Schroeder
Your Impact at Grand Canyon

Thanks to you, GCA and Grand Canyon National Park are...

Supporting internships that immerse students in Grand Canyon

Miles Brown is a senior majoring in wildlife and fisheries biology at Clemson University, in South Carolina. He was selected for Grand Canyon Association’s Eugene Polk Science Fellowship Program, one of three interns to spend the summer living and studying at Grand Canyon National Park. In this letter thanking the Polk family, Miles describes his internship:

“It is impossible to put into words the quality and range of wildlife experiences that I have gained this summer in such a short time. I’ve been able to track California condors, jump in a corral with 45 bison, go down into the canyon and hoot for endangered Mexican spotted owls, measure habitat for our long-lost but hopefully soon-to-be-reintroduced northern leopard frogs, help manage the massive amount of elk on the South Rim, investigate a mountain lion kill site where a lion took down a small elk and trap small mammals to look for hantavirus. I also got to go out at night and capture bats, work with visitors on various wildlife encounters and most recently have had the rare opportunity to work with bobcat kittens in the canyon. I was even able to join the Arizona Game and Fish Department for two days of trapping prairie dogs and attempting to spotlight black-footed ferrets in efforts to alleviate their struggles with bubonic plague. I don’t know how to fit this all on my resume!

“The market for federal wildlife jobs is extremely competitive, and I was worried about how I was going to get my foot in the door, but I have no doubt that the extreme diversity in experience that I have gained here at the Grand Canyon working with the National Park Service will put me well on my way and open many doors.”

The Eugene Polk Science Fellowship Program was created in 2001 to honor Eugene P. Polk, longtime supporter of Grand Canyon. The program awards three internships each year to college seniors or graduate students studying fields such as biology, zoology, archeology, outdoor studies and park management. Polk interns work alongside National Park Service scientists on key research projects throughout the park.
Grand Canyon contains the largest and most continuous naturally existing population of desert bighorn sheep in North America. These animals are among the most visible native large mammals in Grand Canyon and an iconic symbol of the Desert Southwest. At Grand Canyon bighorn live in small populations throughout the park, from Lees Ferry to Lake Mead and from rim to river. However, the majority of bighorn sheep live along the Colorado River, where accessible water is abundant and free-flowing all year round.

In 2010, Grand Canyon wildlife biologists fitted GPS collars to two desert bighorn sheep along the Colorado River, launching the first systematic study of bighorn sheep ecology at Grand Canyon. To date, we have collared, collected biological samples from and tracked 18 individual bighorn captured along the Colorado River. In addition, we’ve collected more than 1,000 biological samples from the lower-, mid- and upper-level reaches of the canyon. Our research gives us a better understanding of bighorn distribution in the park, specifically in relation to available resources such as preferred forage, terrain and lambing areas, as well as potential threats from predators, visitors and infectious disease. With bighorn habitat covering roughly 5,000 feet of vertical relief, relative densities of bighorn vary depending on elevation grades and resource availability, for example forage quality and water accessibility.

Determining the factors governing the viability of Grand Canyon’s bighorn population is a primary objective of the current bighorn study. DNA research indicates that there are four subpopulations of bighorn sheep in the park, with limited genetic mixing between them. The Colorado River is a natural barrier keeping bighorn herds apart. Grand Canyon bighorn have seldom been documented crossing the Colorado River since construction of Glen Canyon Dam, even though park naturalists in the pre-dam era speculated that bighorn sheep could have boulder-hopped across the river during seasonal low flows without ever touching water.
How bighorn individuals move within this immense canyon landscape affects population-level health, including the extent of disease transmission between bighorn herds. In 2013, pneumonia caused a bighorn sheep die-off in Mohave National Preserve, another stronghold for desert bighorn sheep. The die-off was a wake-up call to the potential vulnerability of Grand Canyon’s desert bighorn.

Evidence suggests that a pneumonia epidemic has likely been occurring in the Grand Canyon bighorn population too. In recent years, respiratory disease has become the primary threat to bighorn survival at Grand Canyon. Pneumonia can severely impact seemingly healthy populations, with mortality rates as high as 50 to 90 percent. Juvenile deaths have the greatest impact on herd size, and adults can pass on the bacteria to lambs, resulting in high lamb mortality and population reductions.

It’s not clear exactly how the disease is transmitted, but evidence suggests that the infection originates in domestic sheep. The pathogens causing pneumonia in Grand Canyon bighorn may be a new phenomenon, or they may have been in the population since its first contact with domestic sheep. Regardless, biologists are continually monitoring bighorn survival and mortality to better understand how disease affects the population.

Because of the canyon’s remoteness and topography, understanding the threats to this widely dispersed species is challenging. Recently the Grand Canyon Wildlife Program has engaged non-science-based organizations with vested interests in wildlife conservation at Grand Canyon to help with this comprehensive assessment of bighorn populations. Commercial river guides are observing bighorn and reporting critical information on sick and dead individuals. Additionally, we have established a partnership with the Grand Canyon Youth Program to observe bighorn sheep, record the data and collect genetic samples. We’ve also begun to foster relationships with our tribal neighbors to integrate traditional knowledge into better understanding bighorn sheep at Grand Canyon.

The study is about more than bighorn sheep. Bighorn conservation protects the viability of other wildlife in the park, and the program also illustrates the importance of fostering relationships among stakeholders, something that is needed to productively manage any resource. By combining wildlife ecology with traditional tribal values and citizen science, the quality and quantity of information about bighorn sheep at Grand Canyon significantly increases. Potential impacts and threats to bighorn or other wildlife populations can be addressed in a proactive manner, leading to the development of comprehensive conservation strategies for multiple wildlife species across the greater Grand Canyon landscape.

Brandon Holton, Dr. Jenny Powers and Dr. Ryan Monello inspecting an adult ewe captured near Stairway Canyon in June 2014. All photos courtesy NPS

Brandon Holton is a wildlife biologist for Grand Canyon National Park.

You can make a difference: Make a donation to support Grand Canyon bighorn research at www.grandcanyon.org.
THE American Hog-Nosed Skunk Heads North

By Brandon Holton, Grand Canyon Wildlife Biologist

With the help of river runners, Grand Canyon wildlife biologists have recently confirmed two separate observations of a new species of mammal at Grand Canyon, the American hog-nosed skunk, *Conepatus leuconotus*, along the lower reaches of the Colorado River. A single adult hog-nose was photographed on the north side of the river in August 2012 at 220 Mile Camp. More recently, in August 2013, a single juvenile was photographed on the south side of the river near Pumpkin Springs at river mile 213. The two sightings suggest a breeding population on both sides of the river, and observations in 2014 suggest the hog-nosed skunk is even more widely distributed at Grand Canyon.

American hog-nosed skunks are found from northern Nicaragua north through central Guatemala, Honduras, Mexico and the southern United States. Evidence suggests hog-nosed skunks have declined in recent decades, with the northernmost extent of the species’ range shrinking due to habitat loss and fragmentation. The species has disappeared from Colorado, northern New Mexico and Oklahoma, and populations have dramatically declined in Texas. The current extent of hog-nosed skunks in Arizona is concentrated in the southeast region of the state. Grand Canyon falls to the north of this species’ known northernmost range, indicating either a range expansion or that this species has been overlooked and never documented at Grand Canyon before. Regardless, the discovery represents a remarkable opportunity for wildlife biologists to contribute a sizeable amount of information about a dwindling species to an international community, and also stresses the importance of Grand Canyon conservation efforts.

The Wildlife Program hopes to conduct preliminary non-invasive investigations of hog-nosed skunk distribution and habitat along the Colorado River in Grand Canyon. A by-product of these investigations will be potentially documenting the presence and distribution of other terrestrial wildlife inhabiting the canyon floor, and perhaps discovering other undocumented species along the way.
A family marvels as California condors buzz by. River runners enjoy humpback chubs as they play tag in the Little Colorado River. Photographers capture a bighorn sheep scampering from cliff to impossible cliff. And backpackers enjoy a hard-earned rest while colorful lizards provide campground entertainment.

Viewing diverse wildlife is one of the true joys of any visit to Grand Canyon, and the park has no shortage of amazing critters. The Grand Canyon Field Institute educates participants about these wildlife encounters and works collaboratively with the National Park Service to increase visitors’ knowledge and understanding of Grand Canyon National Park. Though all Field Institute classes address the hoofed, clawed, finned and winged wonders of the Grand Canyon, these classes offer a closer look into Grand Canyon ecology:

**Ecology on the Edge**
May 18–20 (scheduled in conjunction with GCA’s Members Weekend, this class is open to GCA members only)
July 1–3 (open to the general public)
Zoologist and geologist Stewart Aitchison will discuss the fascinating wildlife and plant communities at Grand Canyon.

**Raptors of the Grand Canyon**
September 11–14
In partnership with HawkWatch International, participants will assist with the annual raptor count at viewpoints along the South Rim.

See full details about these and other Grand Canyon Field Institute classes by visiting [www.grandcanyon.org](http://www.grandcanyon.org).
For Your Safety and Theirs
To many people, the opportunity to view the wildlife at Grand Canyon National Park is as amazing as the spectacular views.

Endangered California condors soar majestically above the canyon, while the threatened Mexican spotted owl resides deep within the many side canyons of the park—rarely seen, but often heard calling during the night. Mule deer graze in open areas in Grand Canyon Village on the South Rim, and wildlife including ravens, lizards and rock squirrels are easy to spot from paved trails. Below the rim, visitors might also glimpse desert bighorn sheep, coyotes, ringtails and other species. Mountain lions, bobcats, badgers and rattlesnakes are less commonly seen, but are present in the park too.

Most people know that wildlife at Grand Canyon National Park is protected by federal law. Hunting and trapping are not allowed, yet many people may not realize that approaching or feeding animals is also prohibited. When you approach wildlife too closely, you may cause them stress and interfere with behaviors that are necessary for their survival.

Animals that are fed by people become dependent on human food and may lose their fear of humans, as well as their ability to forage for natural foods. There is a lot of truth to the saying “a fed animal is a dead animal.” In previous years, the National Park Service has
had to euthanize deer, coyotes, rock squirrels and other animals at Grand Canyon that became overly aggressive toward humans and/or completely dependent on food handouts or garbage. NPS staff find it heartbreaking when they are forced to euthanize animals whose aggressive behaviors were caused by visitors who decided to feed them.

Many visitors to Grand Canyon think that rattlesnakes and mountain lions pose the greatest risks to people. In fact, people are much more likely to be injured by rock squirrels because they commonly bite visitors who illegally feed them. And, although many visitors see elk during their visit, these animals are not native to Grand Canyon. However, they have become very comfortable around visitors. Always give these large animals the right-of-way and keep a safe distance when photographing or viewing them.

Grand Canyon National Park is a sanctuary and home for wildlife. By treating wildlife with respect and not approaching or feeding animals, you are increasing their chance for survival. By keeping wildlife wild, you protect their safety—and yours.

Did you know . . .

That if you visited Grand Canyon years ago it would have been rare to see an elk? Although elk were historically found in other parts of Arizona, they were never found inside Grand Canyon National Park. In the 1890s, elk were absent from the state altogether due to overhunting. From 1913–1928, a private conservation group transplanted a total of 303 elk in crates from Yellowstone to various parts of Arizona. These Rocky Mountain elk have been drawn to the water sources at the canyon and have experienced population growth since there is no hunting in the national park. Elk are wild animals, but elk in Grand Canyon have become tolerant of human presence, making them unpredictable and very dangerous. Never feed or approach wildlife.
Visit our online store to place an order today: www.grandcanyon.org

Adopt-a-Lion Products
You can help protect Grand Canyon wildlife. By adopting a lion you directly support wildlife research at Grand Canyon National Park. To say thank you for your generous support we will send you:

- A plush mountain lion, hat or tote bag
- A paw print sticker
- A frameable certificate showing your support of mountain lions at Grand Canyon National Park

Net proceeds are donated to the Science and Resource Management Division at Grand Canyon National Park, therefore no member discount is offered for the Adopt-a-Lion Program.

Grand Canyon Wildlife, Rim to River
by Susan Lamb

From the rims of the Grand Canyon to the Colorado River more than a vertical mile below, a hiker will pass through a succession of “life zones” equivalent to a journey from the north woods of Canada to the deserts of Mexico. This craggy, diverse landscape is a haven for animal life. You may not see them all, but they are overhead, under foot, all around you. In its 64 pages of color photographs and illustrations, Grand Canyon Wildlife: Rim to River, catalogs over 80 species of wildlife, explains the “life zone” system and shares anecdotes of naturalists and scientists. Author Susan Lamb served four years as a naturalist at Grand Canyon National Park and has written dozens of books about the natural and human history of the American Southwest.

$11.95
Member price $10.16

GCA Park Store

Adopt-a-Lion plush toy and certificate
$30.00

Adopt-a-Lion cap
$30.00

Adopt-a-Lion canvas tote bag
$30.00
Did you know that you can make a gift to Grand Canyon in honor of a loved one? It’s a great way to show that you care and provides critical funds to Grand Canyon. It’s easy to make a tribute gift. Just click “Donate Now” at www.grandcanyon.org or call (800) 858-2808.

These tribute gifts of $50 or more were made from October through December 2014 and are a touching reminder of the importance of our friends and loved ones. For a complete list of 2014 tribute gifts, please visit www.grandcanyon.org.

In Honor of Karin Valentine and Tony Roberto’s Wedding
Diane Goldstein, Anthony Gully, Ethel Haber, Kelly Herrmann, Jim Knorr, Daniel Mayer, Diann Peart, Linda Risseuw, Leonard Roberto, Rachel Sacco, Suzanne Sweeney
Deborah Abbott, in memory of Leslie W. Abbott
Judith Aguilar, in honor of Alice and George Carnahan
Karen Allen, in honor of Nancy Buell
Samuel E. Basset, in memory of Joseph Orr
P. Brian Berryman, in honor of Sally and Craig Clayton
John Blaustein and Terry Alexander, in memory of Martin Litton
Susan Brooks, in honor of Seemore the mule
Maureen Buhl, in honor of Jen Hogan, park ranger, PSAR program
Michael Clary, in memory of Pamela Clary
John Crane, in honor of Ranger Betsie Crane
Ladonna DeCou, in honor of Joanne Nissen
Ginger Dodge, in honor of Orin Dodge
Patricia Doerfler, in memory of Gord Kerr
Lee Drickamer, in honor of Susan Schroeder
The Ellis Group, Inc., in honor of Judith Bronson
Scott Ensell, in honor of Duke and CC
Gloria F. Freeman, in memory of Jeanne Lohmann
Robert W. Greene, in memory of Theresa Marie Greene Brown
Aline E. Griffin, in memory of Rob Griffin
Susan Gross, in memory of John P. Gross
Michelle J. Haddy, in memory of Ben Boelman
Jon Heck, in honor of Heck Family
Craig Heldman, in memory of Bob Bontrager
Jayne Hopper, in honor of John Ribble
Kane Hudson, in honor of Grand Canyon Swim Team 2014
Raleigh A. Hunter, in honor of Kerry and Georgia Boyd
Bruce Hutchison, in honor of Joe Mastroianni
Grace Kaigh, in memory of Donald Reinauer
Kristen Kalkbrenner, in honor of Linda and Jim Balling
Brian and Caterina Kavanagh, in honor of Dave Uberuaga, park superintendent, and in memory of Bob Bear, Apache Elder
Sheralyn Kemp, in memory of Bob Bontrager
Bruce Kimble, in memory of Scott Kimble
Roxanne Kunz, in honor of wilderness preservation
Dietmar Lippmann, in memory of William and Florence Kryda
Theresa L. McMullan, in honor of Chris Muldoon, Jim McDowell and Robert Steve
Bob Mobley, in memory of James Mobley
Sharon Morrison, in memory of Tyler Stewart
Christine M. Muldoon, in memory of Bill Balsiger, my husband
Christine M. Muldoon, in memory of Jerry and Dee Duff
Joanne Nissen, in honor of Rachelle Rianda
Elizabeth Novak, in honor of Howard Thiele
Jo Ann Olson, in memory of Scott Olson
Yvonne Pecena, in memory of Bob Kraus
Anna Pettersson, in honor of Johanna Daily and Dan Fusco, my Grand Canyon mentors
Joy Pietropaulo, in memory of Jeanie Larson
Richard Quartaroli, in memory of Martin Litton
Wayne and Helen Ranney, in memory of Grand Canyon ranger Pat Brown
Wayne and Helen Ranney, in memory of Jeanie Larson
Donita Rhodes, in memory of Robert M. Bontrager
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Steve Zabili, in honor of Helen Ranney
Deanna Zelinka, in honor of Chris Seals
Of all the wildlife that call Grand Canyon home, birds may have the most intimate knowledge of the canyon’s mysteries and vastness—they truly have a bird’s-eye view of the terrain. More than 350 bird species call Grand Canyon home. Some live at the canyon year-round, others spend certain seasons here, and some species only briefly stop to rest and feed while migrating to their final destination.

The park’s significance to bird conservation is immense. In 2013, all of Grand Canyon National Park was declared a Globally Important Bird Area by the National Audubon Society, establishing Grand Canyon as part of a global network of sites that are recognized for their outstanding value to bird conservation. Such a high-ranking designation does not come without responsibility. Grand Canyon National Park must be active in conserving the canyon’s avifauna by contributing to the recovery of endangered and threatened species, monitoring avifauna populations long-term, restoring habitat and educating the public.

With the support of donors and members, Grand Canyon Association is raising funds through the Birding with a Purpose program to help support four projects that actively conserve Grand Canyon’s bird populations. The first of these projects is centered on the California condor. Since 1996, when condors were first reintroduced into northern Arizona, they have seen many successes, as well as some devastating setbacks. Grand Canyon National Park is one of many agencies working toward California condor recovery. Each agency is tasked with specific conservation objectives that collectively aim to restore wild condor populations to healthy levels. Grand Canyon’s main objectives include radio tracking and monitoring condors within the park and educating the visiting public about condor biology, recovery efforts and recovery challenges. In 2015, GCA funding will help train and support park volunteers who will monitor condors and educate visitors. With a little help from the condors, there will be at least one active condor nest visible from the South Rim, providing a memorable and effective tool to educate the public about this majestic endangered species.

The second project GCA is supporting affects a bird that is a little less familiar: the Mexican spotted owl. The spotted owl is listed as a
threatened species under the Endangered Species Act. One of the main reasons people are unfamiliar with Mexican spotted owls at Grand Canyon is that they live in steep, rocky canyon habitat deep within remote tributary canyons and are only active at night. Grand Canyon biologists will begin to more intensively research these owls in 2015. Over the course of five or more years they hope to answer questions that will lead to better management and conservation of Mexican spotted owl habitat.

The third project is a well-known and well-loved study that has occurred since 1991: the annual HawkWatch International autumn migration raptor count. The Grand Canyon region hosts one of the largest concentrations of migrating raptors in North America. Grand Canyon partners with HawkWatch International, whose volunteers conduct a standardized raptor count at the canyon over the span of two months. Grand Canyon is part of a network of migration count sites throughout the western United States and Mexico that enable biologists to keep tabs on overall raptor population numbers and to see if a particular species is in peril. Since raptors are at the top of the food pyramid, inhabit most ecosystems, occupy large home ranges and are sensitive to environmental contamination and other human disturbance, they serve as biological indicators of ecosystem health. A decline in raptor species at two sites signals to biologists that there may be something wrong in the environment at those locations. For example, long-term migration counts in the eastern United States documented declines in several raptor species and helped us understand the deleterious effects of organochlorine pesticides (DDT).

The fourth project focuses on what Grand Canyon sees a lot of: people! GCA will support opportunities for park visitors to contribute to Grand Canyon bird conservation. Binoculars, boots, a bird book and instruction can transform an everyday birder into a valuable citizen scientist. In 2015, Grand Canyon would like to expand its citizen-science birding events, which are fun, educational and collect valuable data. Two years ago, Grand Canyon reinitiated participation in Audubon’s Christmas Bird Count, and some impressive count lists have resulted. As part of the Globally Important Bird Area initiative, the park will initiate a second citizen-science birding event to gather additional long-term avifauna data.

Janice Stroud-Settles currently works as a wildlife biologist at Grand Canyon and over the past 12 years has worked on various wildlife projects in Yellowstone National Park, Michigan and Arizona.
Grand Canyon Bats:
Understanding a Misunderstood Mammal

By Janice Stroud-Settles, Grand Canyon Wildlife Biologist

**Did you know** Grand Canyon is home to 22 species of bats and boasts the second highest diversity of bat species in Arizona? Grand Canyon’s amazing bat population exists because of the park’s wealth of roosting habitats, including caves, cracks, crevices and forests found from river to rim. Grand Canyon’s bat diversity includes the largest North American bat, the greater bonneted bat (*Eumops perotis*), which has a wingspan just shy of two feet. Grand Canyon is also home to the smallest bat in the United States, the canyon bat (*Parastrellus hesperus*), weighing only about as much as a penny and having a wingspan of just 7.5 inches.

Because bats are small, secretive, feed at night and are unfamiliar to most people, they are greatly misunderstood and often feared by humans. Studying the planet’s only true-flying mammal unveils an incredible world of skilled flight, echolocation and hibernation. It also reveals the bat’s significant role in a healthy ecosystem: Bats help to control night-flying insects, pollinate flowers and scatter the seeds of plants.

Although bats comprise a quarter of Grand Canyon’s mammal species, we know very little about their populations. Recently, the Grand Canyon Wildlife Program identified the need to develop a long-term, comprehensive bat monitoring program in order to decipher bat population fluctuations over time. Such long-term data is becoming increasingly crucial due to wide-ranging threats to bats such as white-nose syndrome (a deadly fungal disease), wind energy development, habitat loss and fragmentation, and climate change. As a result, bat populations worldwide have been drastically declining in recent decades, leaving wildlife biologists striving not only to minimize and mitigate these threats but also to be aware of potentially declining bat populations.

Unfortunately, Grand Canyon is not immune to many of the threats that face bat populations. Although the National Park Service provides protection to all wildlife, threats such as those facing bats generally do not stop at the boundary of the park. For example, illegal caving activity in the park poses the risk that white-nose syndrome will be introduced into Grand Canyon caves. By developing a bat monitoring program in Grand Canyon, the park will be able to better protect its bat communities while contributing to bat conservation.

**Greater bonneted bat** (*Eumops perotis*).

Photo courtesy NPS
Studying small flying nocturnal animals poses many challenges and requires specialized techniques and skill. At Grand Canyon these challenges are intensified because biologists also have to navigate unforgiving, remote canyon terrain. Many bat monitoring techniques are skills a biologist cannot independently learn, and therefore workshops are commonly offered in order to provide hands-on training to researchers.

Thanks to funding provided by the Grand Canyon Association, the Grand Canyon Wildlife Program was able to learn about successful bat survey tools by sending park wildlife biologist Janice Stroud-Settles to a weeklong intensive bat survey techniques workshop held in the Chiricahua Mountains of southeastern Arizona in May 2014. The location of the workshop proved to be ideal because all of the bat species documented in Grand Canyon are also found in the Chiricahua Mountains. During the hands-on workshop, Stroud-Settles increased her knowledge regarding bat biology, species identification, capture and handling techniques, acoustic detectors and analysis, study design and data management. Upon returning to Grand Canyon, Stroud-Settles held a mini training for the Grand Canyon wildlife staff and shared specific techniques and skills she learned during the workshop.

Future bat research in the park will focus on studying bat species abundance, distribution and seasonal populations in the various biological life zones found at Grand Canyon. Using a computer model, biologists will also predict what caves may have the fungus that causes white-nose syndrome and then focus study on those caves.

This research will aid Grand Canyon managers in prioritizing site management in the event of a white-nose syndrome outbreak and contribute important information regarding unknown aspects of bat ecology in the Southwest. It will also provide an intriguing learning opportunity by engaging park visitors in educational programs that explore the world of bats and the research being conducted in the park. Hopefully such engagement will help more people adopt new attitudes that allow them to accept this soft furry creature as a natural part of our surroundings and give them a greater appreciation for the role bats plays in contributing to a healthy ecosystem.

Janice Stroud-Settles currently works as a wildlife biologist at Grand Canyon and over the past 12 years has worked on various wildlife projects in Yellowstone National Park, Michigan and Arizona.

You can make a difference: Make a donation to support wildlife research at www.grandcanyon.org.
Our mission is to help preserve and protect Grand Canyon National Park by cultivating support, education and understanding of the park.

Donor Profile:  DUDNEY FAMILY AND FRIENDS

Last Thanksgiving our family visited the Grand Canyon, and after seeing its magnificent splendor and learning about elusive mountain lions, we decided to contribute to the Grand Canyon Association. Our son and daughter Owen and Wren were especially captivated by the plight of the mountain lion. As a matter of fact, last December, when asked by their grandparents what they wanted for Christmas, Owen and Wren asked them to donate to the mountain lion fund.

This summer we raised money for mountain lions by organizing the Second Annual Banbury Bazaar. It’s basically a small fair with a bakeshop, a water balloon kiosk, a lemonade stand, art gallery, sand art crafts, robot room and comic book store. We do almost all of the preparations and work ourselves. This year all of our earnings, $254, were donated to protect mountain lions.

— Dudney Family and Friends, GRAND CANYON ASSOCIATION DONORS

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Click the "like" button to follow all Grand Canyon Association happenings!