Welcome to Wing Beats 2013

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Liberty Wildlife

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We hope you like the way it looks!

Dear Friend of Liberty Wildlife,

When you find an injured or orphaned owl or raptor, what do you do?



If you're like most in our community, you call Liberty Wildlife.

Why?

Because you know that native wildlife who are rescued and rehabilitated receive the best care in Liberty's hands. And our release rate is one of the best in the United States.

And you also may know that schools, community organizations, corporations and individuals request over 800 educational programs each year!

Why?

Because Liberty Wildlife provides up-close, interactive experiences with eagles, hawks, owls, snakes, tortoises, and gila monsters in an exciting and informative format.

Your contributions have helped Liberty Wildlife become the leading wildlife rehabilitation center in Arizona and the Southwest – but so much more. We are so grateful to you for supporting our committed team that provides an important community resource through rescue and rehabilitation of native wildlife, robust educational programs, research and conservation services, and a unique non-eagle feather repository program for Native Americans.

Thanks to you, we have touched the lives of thousands every year in both our human and wildlife communities.

At this time, we count on your support - now more than ever.

Your gift is extremely important to Liberty Wildlife because we are not only requesting your support for our operational activities, but we have just acquired land for our permanent campus. Your gift of \$100, \$500, \$1,000 or \$5,000 can make all the difference...... to the wildlife and human communities that we serve so well.



Mbv2

Because Liberty Wildlife is committed to staying on the cutting edge – for you, for native wildlife, for the preservation of nature and for every child that benefits from exposure to nature and wildlife.

Please help make this possible with your contribution of any level.

You can donate directly through the www.libertywildlife.org website under "How can I help" either using PayPal or a secure credit card transaction. Of course, you may also send a check by mail to P.O. Box 14345, Scottsdale, AZ 85267-4345. For additional information, please contact me at (602) 840-5936 or by email at megan@libertywildlife.org.

Your donation will make a world of difference. I promise you.

Thank you so much for your help.

Sincerely,

Megan Mosby
President and Chief Executive Officer





F a I I 2 0 1 3

Condor 133



Of the thousands of birds that have passed through Liberty Wildlife in the more than 24 years I have been a part of the group, a few have been able to leave a lasting mark on my heart. One in particular comes to mind...

The first time I saw Condor 133, I must say I was not terribly impressed, but then again, I was about a mile away, and she was one of six newly freed condors that were only black dots high on the Vermilion Cliff walls. Still, it was an honor to be part of the group from Liberty who were invited to attend the first release on December 12, 1996, and even though the vantage we were afforded on the floor of the valley was less than optimal for viewing, a special feeling was in the air. Dignitaries spoke first, followed by a brief ceremony by six American tribal officials welcoming the return of their brothers after an absence of nearly 8 decades. Finally the hack doors were opened and the six black dots emerged.

Years passed and we heard about a few of the Arizona condors that had not survived along with several more subsequent releases, but I still never had an opportunity to see one up close, until February 2010. The first bird brought to Liberty Wildlife for medical treatment was the last survivor of the original six to be released in Arizona - and it was Condor 133!

Condor - continued on page 20

FROM THE DIRECTOR'S CHAIR

Some exciting news...

The ink is drying on the paperwork; the money has been transferred; the title is in the name of Liberty Wildlife; and the 6.5 acres of land is ours....with a two acre option to boot!

The land is located in the Rio Salado Restoration Area and The Discovery Triangle on the south side of the river between 24th and 28th Street. Unbelievably, as long as I have been watching this segment of the river, over 2 1/2 years, there has always been water along this stretch. Even though it is a desert river there is an aura of a riparian/wetland feel to it and a low water bridge that creates a bit of a waterfall, affording a perching opportunity for wading birds of a variety of species ... a good omen if you ask me.

Mountain views can be seen to the south and north as well as a skyline of downtown Phoenix, and it just feels right for us to use this spot to anchor our future. Finally more room to grow, to be open to the public, to reach more 'students' of all ages and to help more wildlife than ever before...a dream come true!

In this issue we plan to talk extensively about our building campaign and physical needs, to let you know how important it is for us to begin to build our dream. The story of Condor 133 is just an example of how necessary it is for us to be able to teach the importance of caring for such a charismatic creature. Our state of the art hospital will afford us the opportunity to do even more for them when we are called on. The story of the release of a bachelor bald eagle will emphasize the importance of doing research on these aviators. Being able to offer our services to Game and Fish or Fish and Wildlife, in any endeavor that we can, will only

be enhanced by an increase in our size and the accompanying elbow room.

And, just imagine, if we already do over 800 education programs a year in outreach, what our capacity will be to educate the public about the beauty and benefits of our native wildlife. How wonderful to be able to provide the kind of education we already do every day on site as well as in outreach....just imagine.

It is our hope to be a conduit for community pride and enhancement, for spotlighting the significance of a desert river, as well as to rehabilitate native wildlife. All of this can now be done from the banks of the river close to downtown Phoenix. We will truly become a destination point utilized by visitors from around the world as well as next door. Where else will you be able to view daily eagle feedings, have models for your art, photography, wood carving, sculpting? Where else will you be able to observe wildlife under "reconstruction?" Where else will you be able to participate in programs designed to educate or to participate in projects surrounding our valuable resources. Where else will you be able to gain hands on experience, to learn about sustainability and to highlight the principles of recycling and waste management?

Where else? At last, at Liberty Wildlife on the River...that's where. Join in helping us finish the deal and celebrate this very exciting news—at last!

Megan Mosby

Executive Director



Conceptual Rendering of Liberty Wildlife on the River

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Life Prospers with Water

by Gail Cochrane

On a recent road trip through five western states rivers featured prominently in the scenery. Wide rivers flowed through broad valleys deep in agricultural crops and rippling mountain rivers cascaded through dense forests of Douglas fir. The word swoon comes to mind to describe my delight in these magnificent and life giving waterways.

Back home in the desert, however, I began to notice water everywhere and not as heat induced hallucinations. Swollen magenta fruits on prickly pear cacti spoke of water. Water paraded as the late summer quail family. Green growth on the ironwood trees in a dry wash revealed hidden water. Water called out in the hoot of a great horned owl and in the buzz of native bees.

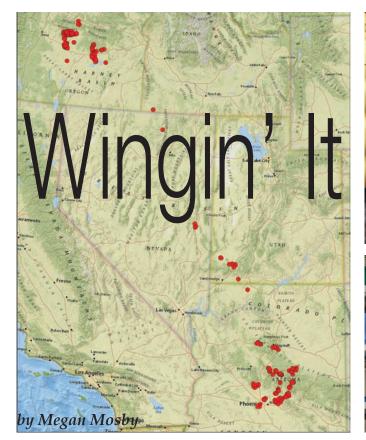
You must learn to perceive water in the desert, as it almost never appears between the lush banks of a river. Water travels invisibly through sun baked washes and is hoarded, scrimped and magically transferred from one frugal being to another. In this way the unreliable amount of water that falls in our two "rainy" seasons is shared and reused through the life cycles of a myriad of creatures.

Succulent plants spread a wide network of shallow roots, drawing water from the soil after even the scantiest rainfall. Cacti guard the water held in their tissues against predators with spines or toxins. Precious moisture is sealed in succulent plant tissues with waxy cuticles and stomata that open for the plant to breathe only at night. Carbon dioxide taken in during the more temperate, humid night is stored for daytime photosynthesis.

Desert plants like creosote and brittlebush shield their tiny leaves from moisture loss with resins, hairs and the ability to fold up.

continued on page 26









To the fishermen at Canyon Lake it seemed a bit odd that the eagle didn't move no matter what happened...

He stood there, occasionally looking as if he was trying to take off but not doing it. In time they realized he was in trouble and began to throw him fish that they had caught...he devoured the fish. A towel was thrown over a tree by where he stood so that he could be located again, and they called the sheriff for assistance. The sheriff called Arizona Game and Fish. Arizona Game and Fish called Liberty Wildlife, and a member of our Eagle Rapid Response Team, John Glitsos, was dispatched to rescue the eagle.

Interestingly, the fishermen had noticed another eagle flying overhead and assumed that this was a mate to the injured bird. It later became apparent that the adult flying above was one of a resident pair and was possibly the cause of the grounding of this eagle....a territorial dispute that didn't end well for Little John, as he was dubbed in honor of his rescuer.

The 4 year old eagle was brought to Liberty Wildlife on September 15, 2012. Radiographs showed a right wing fracture in two places along the ulna, with one of the fractures already beginning to heal. At this time he weighed 4.2 lbs. instead of the 6.5 to 7 lbs. of a normal male bald eagle. The fractures were in good alignment so no surgery was indicated. The wing was wrapped, and he was stabilized. Blood was drawn, a test we do on

raptors especially eagles, to test for exposure to lead and to identify any abnormalities in the blood chemistry. He was found to have had exposure to lead like almost all of the eagles we test, but he was safely in the negative range.

The wing was checked regularly to monitor the healing, and at the 6th week it was left unwrapped as calluses were formed and solid...the sign of healing. Next he was moved to a larger enclosure that would allow him to hop from perch to perch, to spread his wings, and move up to higher perches for exercise. He would remain in this enclosure for two weeks. The final move would be to a 60 foot flight cage for his conditioning and readiness for release.

On December 20, 2012 he was fetched from the flight cage, banded by Arizona Game and Fish and fitted with backpack telemetry. This electronic wizardry, while not hampering the movements of the bird in any way, would allow the biologists at Game and Fish to follow this bachelor bald eagle to see exactly where these single guys go before they pair up. Thirty years of banding information have allowed them to follow fledglings in their first year, but little was known about these bachelors for the next three or four years.

continued next page

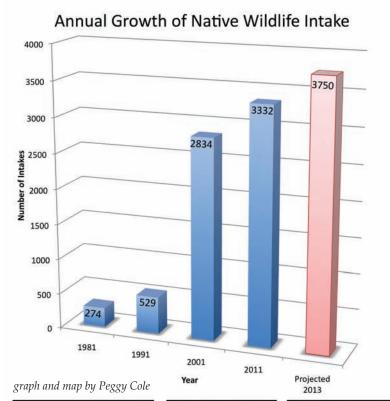
Along with finding out the wanderings of these bachelors, we were thrilled to be able to follow the movements of Little John to see how successful our rehabilitation techniques were. We don't always get to know the long range outcome of birds that we treat. We support them, fix them up, and send them on their ways with a little more than a wish and a prayer....but not so eagle Blue Band #629-52931.

After his release he floated around Arizona until the end of April. Steady wings! Then on April 30th he got a whiff of something appealing and took off toward the west coast. In five days, on steady wings, his signal was picked up in Oregon where he remains at the time of this writing. The red dots on the map indicate his travels. The final coup will be to see where he ends up. Will he come back in the fall to his natal territory like the fledglings do? Will he find a mate and a territory to start a new phase of life? Or, will he take off again to the west coast where food is plentiful and weather a bit balmier? Time will tell.

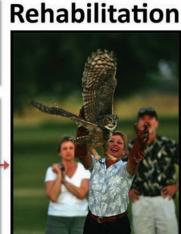
We may not know the answers to these questions yet, but we do know that our rehabilitation practices worked, and that bald eagle, 629-52931 aka "Little John," left Liberty Wildlife wingin' it on steady wings....aaah sweet success!



This page - Arizona bald eagle in flight
Previous page - Jan and Joe Miller working with bald eagle
photos by Terry Stevens

















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Delivering the Message

by Claudia Kirscher

Anatomy of an education program...

Liberty Wildlife provides first class educational programs using trained handlers/teachers presenting wellconditioned Educational Ambassador eagles, hawks, falcons, owls, tortoises, and snakes who have been deemed non-releasable. A diversity of programs at schools and various civic functions are scheduled from October through April to further our mission's message of environmental education, conservation services and sustainability for the community.

Each educator has gone through enhanced and sustained training with 8 weeks of classes, which include coaching on presentation skills, facts and histories of the species presented, the particulars and details of putting a program together, along with Liberty Wildlife travel and program protocols, followed by an extended period of mentoring with seasoned educators during hours of hands-on practice with the various Education Ambassadors.

Every person on the Education Team, ages 18 to 70+, enhances and enriches each presentation by their diverse backgrounds, life experiences, and occupations (See sidebar next page). How does a single program happen from initial phone call request to completion?

- Request taken by Education Program Coordinator, researched, and posted on calendar.
- A Program Coordinator (PC) volunteers to take charge and organize the presentation. They will contact the requester immediately for further

continued next page

information and requirements, theme, directions to site, etc.

- The PC then contacts the one or two Education volunteers who have offered to help on that date to coordinate meeting times and appropriate wildlife for event.
- The PC coordinates equipment and wildlife with other PCs who may have a program on that same day.
- One week prior to the program, the PC will contact the requester once again to confirm the program and to check for any changes.
- Presenters meet at Liberty Wildlife at least one hour prior to leaving for the program (average commute from home to Liberty Wildlife is 30 to 40 minutes). They will load up all equipment, displays, and handouts. They will then put the birds/reptiles into their individual carriers and load them into a volunteer's vehicle.
- Average drive to a program is 40 to 60 minutes (occasionally others may be 2 to 4 hours).
- Once at the program venue, unload all wildlife and equipment.
- Time at program (a school program for this example) is one hour. A booth program may last 2 to 6 hours.
- At end of program, re-load all equipment and wildlife, and drive

back to Liberty Wildlife (40 to 60 minutes).

- Once back at the Liberty Wildlife facility, unload wildlife and equipment. If necessary, feed birds and then return them to their enclosures. All equipment used must be cleaned/ washed, program supplies will be restocked and put back, and the animal carriers washed. This usually takes another 45 to 60 minutes.
- Final paperwork completed and turned in to the office.
- Educators can then go home (30 to 40 minutes of commute).
- Average time involved for this 1-hour program is 6 hours. A booth program would add 2 to 6 additional hours to the volunteers' day.

The above sequence of events happened 827 times during this past education season with 56 volunteer Educators who, not counting commute distances from home, drove a combined total of 21,266 miles (from Liberty to the program and back to our facility) delivering the Liberty Wildlife educational program experience to a seasonal total of 144,644 people, all done with no charge!!

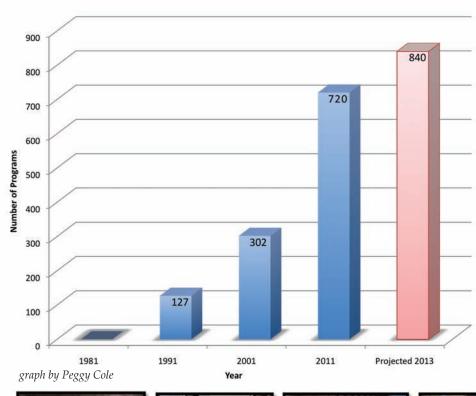
> Well done **Education Team!!**

Education Team Occupations:

- Teacher, special education
- Leadership development
- Captain with America West/US Airways
- Fiber sculpture artist
- Massage therapist
- Social service administrator
- Substitute teacher
- ASU instructor
- Teacher, high school science
- Post-grad Master's
- Self-employed software developer
- Wildlife artist
- Homemaker
- Photographers (several) self-employed
- Bookkeeper for landscape company
- Self-employed web designer
- Adoption counselor AAWL and SPCA
- Registered Nurse
- Acoustical engineer, self-employed
- Medical transcriptionist
- College student
- Construction management
- OSHA safety officer outreach trainer
- Water features manager, Hyatt Scottsdale
- Including those retired from:

Qwest/Century Link; biology teacher; law office administrator/ adult probation officer; loan officer; administrator/manager Az Dept. of Transportation; environmental health; registered nurse; teacher

Annual Growth of Education Programs



Education



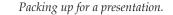














It all fits!



Research and Conservation: Rescuing, Raising, Releasing

by Nina Grimaldi

Spring is a busy time for Liberty Wildlife, and it keeps the Research and Conservation Department on our toes. The owls, hawks, corvids, and many other birds begin nesting. Many of the larger birds prefer to have their nests as high as possible. Unfortunately, in the desert those high-up locations can be hard to find, and many birds choose to nest on power poles or other dangerous equipment. That is when we work with the utility companies to relocate the nests.



Common raven nest in a dangerous area on a power pole

We prepare for a large number of eggs and babies to come back to Liberty Wildlife with us when we head out to do a nest move. The brooders are plugged in and warmed up, and the egg incubators are fired up and ready to go. We have been doing this for years, and we do a great job. However, with everything, there is always room for improvement. No human can ever truly replace the care of the actual parent, but we can certainly do all we can to nearly fit that role. We owe it to each bird and to each bird's

parents to do our very best to make sure it survives. This past winter I began searching the internet and books to learn how other rehabbers were raising raptors from egg to fledgling. After combing through a myriad of materials, I made a few changes to diet, brooder temperatures, and length of time in the brooder. These changes were especially important to the survival rate of Common Ravens. I am always surprised at how fragile and needy ravens are from hatching to fledging age.



Common raven eggs

The changes I made for the ravens included adding more humidity, more variation in the diet and less heat. I was able to acquire a large brooder that allowed for better control of temperature and constant humidity levels (thank you Susie). We have always fed the hatchlings mouse mush, but this year we integrated soaked dog food and egg (raw and cooked). As they grew we added bits of other things as well. The birds were ravenous eaters, and we were constantly making food and feeding them. In the end we had great success with our new rearing practices.

The ravens were gaining approximately 20 grams per week during the first few weeks. As they added feathers it seemed as if they were doubling in size until about 9 weeks when they reached full size. We fed them using puppets and wore camouflage to prevent imprinting. We also gave each young raven subcutaneous fluids once a week to keep their hydration up.



A newly hatched common raven



Nesting ravens beginning to get feathers

We now have 12 strong young ravens preparing to go free, to fly and stretch their wings, to hunt and to have a family of their own. We are proud parents indeed.

Liberty Wildlife Non-Eagle Feather Repository

We are proud to announce that our Non-Eagle Feather Repository (NEFR) has been made permanent. The Memorandum of Agreement with the U.S. Fish and Wildlife Service to support a pilot program was signed in October, 2010, and after a very successful two-year trial period the Service has made the program permanent.

We could not have had such a successful program without the help of the Melani and Rob Walton Fund of the Walton Family Foundation. We thank them for their belief in our efforts and their willingness to support our mission.

For countless years, Native Americans have used various natural resources – including wildlife – not only for subsistence, but for cultural and religious purposes as well. Feathers are among the most prized and sought-after items for these practices. The unpermitted collecting of feathers has negatively impacted these migratory bird populations.

Through the Non-Eagle Feather Repository, Liberty Wildlife hopes to help fulfill the needs of Native Americans for feathers, while reducing the pressure of the non-permitted take of migratory species that results from the illegal harvesting of these species.



graph by Peggy Cole

Since the program started in October, 2010 . . .

Number of states requests have come from: 40
Number of requests received: 1949
Number of requests fulfilled: 1602
Number of Tribes represented: 161
Most requesting tribes: Hopi & Navajo

Most requested bird: Red-tailed Hawk









From the Orphan Care Desk:

A Spotlight on Baby Quail and Doves

by Karen Wu

There are generally two types of baby birds: The precocial type and the altricial type. Precocial birds like quail are born with their eyes open, can eat on their own, and are ready to take on the world with mom and dad! Altricial birds such as doves, on the other hand, are born helpless and unable to find food on their own. They need a little more tender, loving care from their parents. Here's a spotlight on two of our common species, one of each type, and what to do if you find a baby bird on the ground. The key is knowing whether it is a hatchling, nestling or fledging, and an orphan. Our chart (to the right) is designed to provide a quick way to determine what steps, if any, vou need to take.

Gambel's Quail

They are cute. They are fuzzy. They inspire the "awww" factor in all of us. They are baby Gambel's quail. Hours after they are born they can eat on

their own and will move about and search for food with their parents. Although Gambel's quail as adults eat mainly seed, the chicks will eat insects for the higher protein content.

The breeding season for Gambel's quail starts typically in April and will usually last until June or July. A breeding pair is monogamous and will stay with each other for the entire breeding season. They will usually only have one brood of 10-12 eggs, incubating them for 20+ days.

Caring for these tiny birds can be tricky. Despite being able to eat independently of their parents, they are still fragile in many ways. If they fall in even a small amount of water, they can get too cold and suffer from hypothermia. Too much stress will cause the babies to peck at each other and themselves, potentially causing injuries.

If you see a baby quail alone, observe at a distance. If the parents are around, oftentimes they will get spooked by unknown visitors near the baby. If the mother and father have not come for the baby, or called out to it, the little baby might need rescuing. These little quail need specialized attention despite being precocial and will not do well being raised in a private home, so please call our hotline number at 480-998-5550 if you suspect there's an orphaned quail in your area.

Mourning Doves

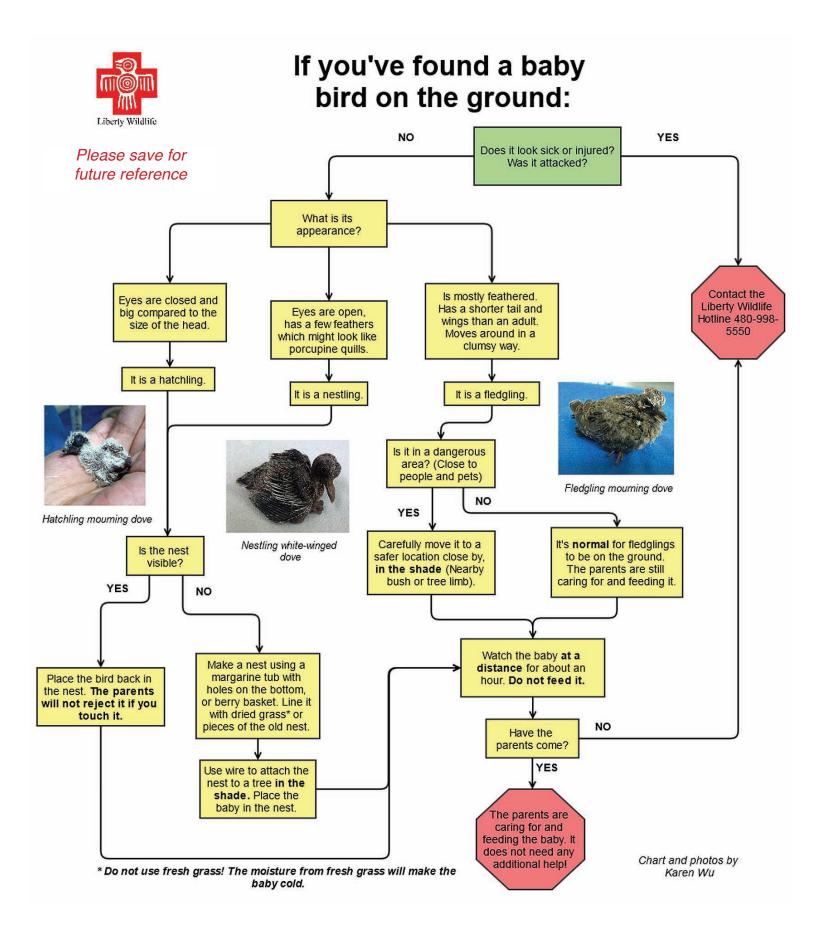
One of our most common native birds is the mourning dove, named for its mournful sounding call. Mourning doves will usually raise at least 3 broods during the breeding season which runs from March to September. A pair will typically mate for life. They will usually lay 2 eggs that will incubate for about 2 weeks. During the incubation period the male will sit on the eggs during the day while the female will take the "night shift." The hatchlings have closed eyes and are covered with a white down over dark grey skin. In about 2 weeks the babies will leave the nest nearly fully-feathered, but the parents will continue to care for them until they are about a month old.

Both the mother and father will provide the babies with an essential "crop milk" which is rich in nutrients that will provide healthy growth for the first few days of their life. After about four days, the babies are weaned onto a mix of crop milk and seed.

If you've found a baby bird on the ground, determine whether it is a hatchling, nestling, or fledgling. Please see our chart to the right for reference.

You never soar so high as when you stoop down to help a child or an animal.

Iewish Proverb



11

Full of love. Out of space.

For more than 32 years, Liberty Wildlife has been committed to helping native Arizona wildlife. Our doctors, staff, volunteers and supporters share a love for nature. They also share a very small space — the same building we moved into three decades ago. As our services and the community grow, so does our need for a bigger, more modern facility.

Frankly, Liberty Wildlife is bursting at the seams, making relocating critical to our ability to continue to nurture Arizona's nature.

Today, Liberty Wildlife's commitment extends beyond its original mission of wildlife rehabilitation services into community education, nationally recognized research, statewide conservation, rescue and transportation of animals, a hotline that takes more than 19,000 calls a year, and many other services that benefit not only native wildlife, but all other Arizona residents.



More land. More space. More ways to help.

Good news. We found a centrally located piece of land in Phoenix; it's close to Sky Harbor Airport and south of the Salt River. The 6.5-acre parcel is in the Rio Salado Restoration Area and within the Discovery Triangle. This expanse is the focus of thoughtful development to bring life back to the historic river, including the restoration of wildlife and open spaces.

Liberty Wildlife is excited about the location and its connection to the Rio Salado Restoration Area.

The acreage will allow us to build a new campus with

the room to house our expanded activities. Equally important, our new home will give us the chance to open up our doors to the public on a scale we simply could not do before.

Helping Arizona wildlife has always been our guiding passion. In addition to providing us with much-needed space, the new campus will establish Liberty Wildlife as a permanent destination and resource for the community to reconnect with native animals and habitats.



Arizona's wildlife needs us. We need you.

Liberty Wildlife's benefit to Arizona has expanded far beyond our original mission to provide rehab services to the state's wildlife. Our amazing growth is due to people like you who recognize the importance of protecting and promoting Arizona's wildlife.

Your support will help build the new campus and have a direct, positive impact on the community.

For all the ways you can help, call 480-998-5550 ext. #2 or visit libertywildlife.org



One of only three rehab centers in the U.S. assisting California condors.



Campus will become a destination point for locals and visitors.



P.O.Box 14345, Scottsdale, AZ 85267 | 480-998-5550 | www.libertywildlife.org









Top: Bat drinking, Elephant Head - photo by Christy van Cleve Middle left: Porcupine, North Kaibab - photo by Christy van Cleve

Middle right: Bald eagle - photo by Kenny Wilkins

Bottom left: Baby burrowing owl - photo by Lesley Guenther

Opposite page

Top right: Flicker - photo by Kenny Wilkins

Middle left: Screech owl - photo by Lesley Guenther
Middle right: Coues deer fawn - photo by Christy van Cleve

Bottom: Sandhills preening - photo by Terry Stevens











Liberty Wildlife's International Connection:

A Gallery of Volunteers from Afar

by Carol Suits Volunteer Coordinator

Two years ago we had the pleasure of welcoming our first international volunteer, Sergio, from Brazil. What we thought was a unique experience was in fact the tip of the iceberg. Since that time we've welcomed 8 young people from Europe and one from Canada as volunteers.

When asked why they chose us, most were excited about helping wildlife, exploring the desert, improving their English, and most importantly, learning about our culture. All spent a minimum of 8 weeks at the facility feeding and cleaning in Daily Care and Orphan Care. Please take a moment to meet some of these volunteers who we wished could have stayed with us longer.



Inge Thomas, 24 - was born in Aachen, the most western town in Germany, which along with two other towns forms the "Dreilandereck," a point where Germany, the Netherlands and Belgium meet. When she joined us in November, Inge had just finished her studies at the University of Education in Heidelberg and was preparing to enter teacher training

upon her return to Germany. "I hope that I will get the chance to fulfill my biggest wish: go abroad, learn about the animals, improve my English skills and get new and unforgettable experiences."



Vanessa Appl, 21 - joined us in February from Bargau, a village in Germany, where she lives with her parents and older brother. In the summer she often went on holiday with friends and family to Spain, Greece, Turkey, Egypt, Croatia, and Tunesia. Still she says, "Since I was 16 years old I had the dream to travel to America. The country, and also the nature, was always fascinating for me. The language, English, was always interesting for me, too."



Rene Lems - comes to us from

Amsterdam, the Netherlands. A graduate of Hanze University of Applied Sciences and a premaster student at VU University, Amsterdam, Rene took a summer break from his computer science studies to visit with friends and volunteer for 3 months at Liberty Wildlife. It's been our experience that most of these volunteers stay with us for 8 weeks, and in that time they learn their jobs and start making friends. Just as we get to know them well, they leave. The few like Rene who stay longer become an integral part of the team, making it even more difficult to say good-bye.



Line Birkeholm, 22 - had just finished the first part of her education as a zoo keeper on Hansenberg in Kiolding, Denmark, when she decided to volunteer at Liberty Wildlife to "... improve my experience with animals, learn something about how you work with animals in other countries and learn more about animals so I can be a full-time zoo keeper in a Danish Zoo or work with rehabilitation of animals."

Nico Ludewig, 23 - was excited to be a part of the Liberty Wildlife experience. He's from Wiesbaden, Germany and did his apprenticeship



as a health care management assistant in Frankfurt. In his application he wrote that he grew up with animals. "So I thought why shouldn't I connect a trip into the USA by seeing the beautiful places, take care about animals and improve my English. I really would like to help your great cause and do not mind to work hard or get my hands dirty."



Steffen Muller, 19 - joined us at the height of the busy season. Like most of our international volunteers, Steffen is from a northern climate, so the summer has been a challenge! Steffen comes from Ibbenburen, a rural city in the west of Germany, where he lives with his parents and 17 year old sister. He completed secondary school in April where his

favorite subjects were foreign languages and sports. In addition to German, he speaks French, Spanish and English. After his time at Liberty, he traveled to Vancouver, Canada to volunteer at a wildlife refuge for mammals.



Nora Schmitt, 20 - finished her Abitur in Dusseldorf, Germany this year. This is a certificate issued to candidates who have passed final school exams. At twenty years of age Nora is focusing on education and history and has also applied for voluntary service in India working with children. She's traveled with her family to Paris, Budapest, Poland, Belgium but never the USA, where she hoped to improve her English and "come to your wildlife center to work with the animals."



Natalie Roloff, 18 - was the youngest

of the international volunteers. She's from Buchholz which "is a nice small town near Hamburg in northern Germany." Natalie has been to the States many times visiting with her parents and as an exchange student in 2010, living in New Jersey. "I'm excited to finally get to do some outdoor work in the USA and I won't mind getting my hands dirty. I'm glad to have the opportunity of contributing to a great cause."



Tess Furlong, 19 - is from Toronto, Ontario, Canada. She lives with her parents and 22 year old brother. She is currently attending Ryerson University, and in her spare time plays basketball with her brother and friends. She was anxious to get started at Liberty Wildlife saying in her introductory letter, "I have always wanted to get out of my comfort zone and do some good in the world and help with animals and their well-being. I believe that whenever I am involved in a project, I will give it my 110% and put any needs before mine, when it comes to the good of the project I am working on."

The purpose of life is a life of purpose.

Robert Byrne

16 continued on next page

News Flash:

all rescues aren't the same

The Liberty Wildlife Hotline and the Rescue Team work very closely to assist anyone in the state with assisting wildlife in need. Many are truly heroic; many are heartbreaking; many are joyful; and then some are just plain funny. Here are a few in the latter category straight from the mouths of the rescuers.

Rescue facilitated by Hotline volunteer, Lorenza Daniel: If It Quacks Like a Duck..... Hello,

I'm trying to send this e-mail to the kind volunteer who helped me with the "duck" rescue Friday night (August 30th). I should have written down her name but did not. She responded to my emergency call around 8:30 PM concerning a duck caught in a storm drain in south Chandler. I could hear what sounded like a mallard's distress call coming from the drain, so I called Liberty Wildlife and the volunteer managed to get Chandler Fire to respond.

After the firefighters lit up the storm drain with their flashlights, the "duck" turned out to be a lowland burrowing tree frog whose (insert expletive here) loud mating call sounds just like a duck in distress.

After apologizing profusely to the firefighters (fortunately, they found the situation rather humorous as I'm sure I will... some day) I made sure they knew I was the one responsible for them being there and not Liberty Wildlife. They told me it was no problem, it was an unusually slow night for them anyway. One fireman jokingly offered to go ahead and rescue the frog, but I told him that he probably prefers being in the storm drain since it makes his @#!&!! loud mating call even louder. :)

I have included a link below about this frog which also has a sample of what

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it sounds like, in case someone else makes the same mistake. My frog was less buzzy sounding than the sample, probably due to the 'storm drain amplification factor.' <grin> http://www.reptilesofaz.org/Turtle-Amphibs-Subpages/h-s-fodiens.html

Thanks Again, Alex in Scottsdale

Stories from John Glitsos: Coiled Just Like a Rattlesnake

I received a rattlesnake relocation call in the West valley - and told the hotline volunteer that it would take me a while to get there from my house near Fountain Hills. She said to hurry because they sounded really scared. When I got there, I found a group of people, from teens through senior citizens, sitting on the kitchen counter, lined up like books on a bookshelf. They were staring down at the snake, which was coiled up near their breakfast table.

I took one look and knew what I had to do... I walked over, picked up the harmless coach-whip snake with my bare hand and left the apartment and its wide-eyed inhabitants.

Wait: It Can Run, Swim, and Fly!

I received the "wild goose chase" call from the hotline for Chaparral Park lake. The goose had fishing line wrapped around its leg, and there was already a Liberty Wildlife rescue volunteer there needing assistance to trap it. When I arrived the other volunteer pointed out the goose sitting on a small island across the channel from our vantage point. I told her we should give up now, because the goose could obviously swim, fly and run while we could barely manage one of those.

She said, "NO! We have to try," and with that waded into the neck deep channel and crossed to the island. No sooner did she get there than the goose flew over the channel on the

other side of the island - away from me and her. Then it turned and looked right at us and honked, as if to say, "neener, neener, neener!"

Look Before You Leap

When I first started as a volunteer, I got a call at an apartment complex in the swimming pool area. It was an owl stuck in a tree, and it had been there for hours in the same spot. So I asked the apartment maintenance staff to bring a ladder and climbed up to the roof. I got a running start across the roof and leaped to the top of the Eucalyptus tree above the pool. Instantly, the owl flew away, over the apartment, across the freeway, and disappeared from sight, leaving me stuck.

Soon there were a dozen people looking up and wondering how a full grown man had gotten up there, and

Goose Relay Race

Yup, another goose call...same story, fishing line around the foot. The difference was that this caller had a plan. She would startle the goose and run along the lake, keeping it from getting into the water, while I ran parallel to her with a net to catch the goose. The second she got within 20 feet the goose took off like a rocket. She, it turned out, was an Olympic-caliber sprinter and was able to keep up with it, while I huffed and puffed along, trying to keep within 30 feet. Suddenly, the goose panicked, made a left turn, and literally flew into my net. She came over and said, "We make a great team! What if I volunteer and you and I take all the waterfowl calls for Liberty Wildlife?" If I had been able to catch my breath by then, I would have screamed!

Stories from Terry Stevens: Let's Be Clear About This A while back, before the term "cell

phone" became ubiquitous, I got a call from the Liberty hotline. They had a red-tail hawk down in Mobile, Arizona, that required my rescue services. When I got out my state roadmap I was intrigued as to how the hotliner had determined that I was the one to call for this particular rescue. After I had gone on the mission and had returned the bird to Liberty Wildlife, out of curiosity I called the hotline. Luckily the same volunteer was on duty, and after I told her I had successfully gotten the bird I asked her why she had chosen me to go to Mobile. She hesitated for a moment and then replied, "Well, according to my sheet you have a Mobile phone number." I immediately understood and suppressed a laugh. I told her as politely as I could that actually, I had a "mobile" phone number, as in cell phone...

OK, Define "BIG"

One day I was at the Liberty Wildlife facility and got a call from the hotline. A lady down towards Chandler Heights had a large bird that they had "rescued," and it needed to come to us. I called her and she assured me it

was very large and was most likely some sort of hawk. She said that they knew something about birds and this one was definitely BIG! I got directions, grabbed a large carrier, got my glove and drove the 35 miles down to the southeast valley. When I got to the house, I knocked on the door and introduced myself. The lady said she was glad I made it and that the bird was in the garage. Half suspecting to find a large female ferruginous hawk or possibly a golden eagle, I was looking past her for a large crate. We walked in and she picked up this little shoebox and handed it to me. I looked inside and saw a two-day old sparrow in a wad of tissue paper. I courteously explained that it wasn't really a hawk, but that since he was an orphan he probably did need some help. I took him back to the OC folks at Liberty Wildlife.

Herrings in Your Yard?

Every so often I get calls from the hotline about some sort of water fowl or shore bird in somebody's backyard. Sometimes when I call the people in whose yard the bird is, they tell me,



Terry Stevens ready for rescues

"I have a herring in my yard!" My response is always the same. I politely say, "You have a fish in your yard?" After they realize what I have said, I explain the difference between herons, egrets, and cranes, all of which look the same to most people who are not birders in their spare time. Every rescue can be an educational opportunity if you treat it correctly!

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10 ways YOU can help the birds

- 1. Recycle paper and aluminum and avoid plastic bags wherever possible more recycling means less energy used to produce new materials.
- 2. Keep the environment clean dispose of used/damaged fishing gear and other outdoor trash in appropriate containers.
- 3. Conserve electricity less generation of new power means less fossil fuel consumption and better air quality.
- 4. Use bird-friendly products such as shade grown coffee this leads to less habitat destruction and deforestation in critical habitats.
- 5. Keep pet cats inside Audubon estimates over 1 billion birds die from cat attacks every year.
- 6. Promote and nurture bird-friendly backyard foliage this helps provide homes and food for native wildlife.
- 7. Limit outdoor water usage this promotes the growth of native flora and discourages harmful plant and insect proliferation.
- 8. Use garden and yard insecticides and herbicides sparingly any poisons applied to the environment can be hazardous to birds and other animals.
- 9. Practice safe/natural rodent control toxins travel up the environmental food chain and concentrate as they rise, killing apex predators like eagles and
- 10. Notify Liberty Wildlife of any wildlife problems we have volunteers trained to appropriately and safely handle most wildlife issues.

Suppose first for soons

Condor... continued from page 1



I walked down the corridor, looked through the slats, and was thunderstruck. The bird was huge! She was standing on a stump platform and looked at me over her shoulder. "Stunning" is the only word that came to mind. Condor 133 was hatched at a breeding facility at the Los Angeles Zoo on May 22, 1996, a little over six months prior to her release. Now she was 14 years old and was in our care because the lead in her blood had reached a level that had produced classic symptoms including "crop stasis," meaning she could no longer move food into her stomach and would soon starve to death, absent extraordinary intervention. This was not the first time her life was threatened by lead poisoning as she and other condors roamed from the Vermilion Cliffs to as far north as the Wyoming border, but she was a fighter and had produced three chicks. Since she was known to be a productive, skillful mother, the Peregrine Fund's California Condor Recovery program wanted her back in the wild population. No effort would be spared to make her healthy again and return her to the gene pool of the Arizona colony of California condors.

During the next four months, we learned a lot about treating condors at Liberty Wildlife. Under the guidance of Dr. Orr and Project Director Chris Parish, 133's crop was opened and cleaned. A feeding tube was inserted into the bird's stomach, and twice a day we had to grab her (NOT an easy task!) and hold her while food, fluids, and medication were administered. The treatment, called chelation, involves injecting a chemical that binds with the lead and allows it to be removed from the blood by the kidneys. This was usually a three-person task and required both muscles and finesse to accomplish without producing stress in the patient – or injury to the volunteer! The process goes on for a period of days, then it stops for another few days to allow the patient's system to recover, then it begins again. As the treatment began to work and her lead levels dropped, she became stronger, and the procedure actually got more difficult over time. This was good news: she was getting better!

By April, 133's lead levels were once again in the "tolerable" range, and she was deemed fit for release. She was driven up to the Vermilion Cliffs Release Pen where she first experienced freedom in 1996. There she got to spend a day or two in a protective pen to acclimate her to the

ambient conditions on the plateau above the Grand Canyon and to get reacquainted with some other condors that were also getting prepped for release. Soon she was again flying the open skies in northern Arizona and southern Utah, ready to play the dangerous game of life in the wild one more time

Condors can live as long as 70 years, so 133 was really only a youngster when, in early February of this year, she was found dead at the age of 17. A necropsy was performed though ultimately proved inconclusive. Indications are that she may have been the victim of a predator, possibly an attack by a golden eagle, although we will probably never know for sure. Ironically, after 19 documented exposures to lead poisoning in her short life, the lead levels in her liver at the time of her death were only slightly above detection levels. One can't help but think that if she was in fact killed by a predator, she might have in some way been compromised by the lingering effects of repeated lead exposure. Adults rarely succumb to predation unless they are suffering from hidden ailments.

We've seen several condors in the last few years since 133 was with us, but she will always have a special place in our hearts. Whenever I fly over the Vermilion Cliffs, I make a short PA announcement to my passengers describing the Grand Canyon and the California condor release site. As I tell the story of the condors and the efforts to keep them alive, in my mind I picture 133, remembering what it was like to grab and hold her during her daily procedures. But beyond the techniques and procedures we learned about California condors, we came to realize how nature had instilled in her the will and determination to survive and propagate again and again, despite what the world threw at her. It was an honor to have been a part of her short, spectacular life.

"When I heard that she was gone, I felt a shadow cross my heart..."

Meet the Goshawk

by Greg Martin

The northern goshawk is one of Arizona's most beautiful, impressive, and elusive birds of prey. The fact that Liberty Wildlife is currently treating two of them is a very rare occurrence: Goshawks prefer high elevations and dense forests, meaning that they're far from major human populations and thus less likely to be discovered if injured. We have significantly more experience dealing with sharp-shinned and Cooper's hawks, which along with the goshawk are North America's representatives in the Accipiter family of hawks. Comparing those two to the northern goshawk, however, is like comparing a fighter jet to a 747. Except this jumbo jet is every bit as fierce, fearless, and maneuverable as its smaller cousins.

Accipiters are differentiated from falcons and other hawks by being specially adapted to living in forests. Their tail feathers are proportionately longer than in other raptors and their wings are shorter, which gives them extra maneuverability in the tight confines of the woods. Accipiters are bird killers, first and foremost; their physical traits give them the capacity for aerial chases reminiscent of World War II dogfights, and while there may be faster birds of prey, few, if any, can match them in terms of agility. As they typically pursue prey in an environment where a single wrong turn or late bank can mean smashing into a branch or tree trunk with fatal results, it makes sense that nature has given them both twitch reflexes and a personality to match

Beyond their physical characteristics, accipiters share a volatile temperament that has given many a biologist and rehabber fits. Accipiters are highly strung, manic creatures, possessing an intensity that eclipses practically any other raptor. Accipiters are among the most challenging patients at Liberty Wildlife simply because they are so inherently stressful; they are quicker to enrage and slower to calm down than other birds and can even go into epileptic seizures if they become too overwhelmed. Our standard approach for treating accipiters is based on speed, efficiency, and for the bird's sake, as much peace, quiet, and separation from us as possible.

It's difficult to look at the goshawk without also considering the sharp-shinned and Cooper's hawks because, more so than other groups of hawks, accipiters are very much reflections of one another. They are so closely alike, in fact, that even though we have had few goshawk patients over the years, our frequent run-ins with those smaller accipiters have more than prepared us to care for them. Besides the aforementioned wing and tail adaptations, all three species are practically indistinguishable from each other in terms of plumage. Young accipiters are light brown with a mottled, cream-colored chest, a banded tail and pale yellow eyes. As they age, subsequent molts give them a striking, slate gray coloration, lighter on the chest and



Goshawk...continued on page 27



If you've been searching for some wildlife related information for your youngster that's designed to entertain, enlighten and perhaps encourage further exploration, we have some specific suggestions and a list of web sites for you and your family to visit.

Apps

Apps4kids: Dot to Dot Zoo, Ages 3-6 Apps4kids: Bird Guide for Kids, Ages 4-7 Commonsensemedia: Britannica Kids: Snakes,

Commonsensemedia: Animal Planet: Trivia Challenge, Ages 7-9

Commonsensemedia: Trash, Chaos, Recycling, Ages 9-11



Books

Green by Laura Vaccaro Seeger, Ages 2-5 Birds by Kevin Henkes, Ages 3-6 The Magic School Bus and the Climate Challenge by Joanna Cole, Ages 7-10 The Jungle Book by Rudyard Kipling, Ages 8-10 Wild Wings by Gill Lewis, Ages 9-11

Videos

Nationalgeorgraphic/kids: All kinds of birds Neok12: Eagles fight mid-air Arkive.org: Burrowing owl with dirty face Arkive.org: Kestrel won't share food Arkive.org: Bald eagle babies and teenagers

Web Sites

http://pbskids.org/sid/videoplayer.

http://videonationalgeographic.com/ video/kids/

www.neok12.com

www.arkive.org

www.education.com

www.sciencekids.co

www.scientificamerican.com

www.cams.allaboutbirds.org

www.apps4kids.net

www.commonsensemedia.org

by Carol Suits Volunteer Coordinator

Green At Work!



Green at Work...Watch for a Change

Since 2001 thousands of Arizonans have been able to give "green" at work through the Environmental Fund for Arizona. Since that time 28 leading environmental organizations throughout the State have been the recipients of the generous giving of employees of the workplaces listed below.

American Express Ameriprise State of Arizona City of Chandler City of Goodyear City of Flagstaff City of Mesa City of Phoenix City of Tempe

City of Scottsdale City of Surprise City of Tucson Town of Oueen Creek Coconino County Pima County Maricopa County Desert Botanical Garden DMB Associates

JP Morgan Chase Maricopa County Federal Employees Prescott College Raytheon Boeing Southern AZ Federal Employees United Health Wells Fargo

You can donate through EFAZ in these workplaces, but if your current workplace doesn't offer a "green" choice contact EFAZ to learn how easy it is to start an EFAZ program at your workplace.

An exciting change will occur in June of 2014 when EFAZ affiliates with EarthShare and becomes EarthShare Arizona. This may open up doors to many of you who have not been able to give where your heart is. Look for these new opportunities. The future is indeed bright for green workplace giving in Arizona. If you have questions about EFAZ or the new EarthShare Arizona, contact Kim Parrott at 480-510-5511.



Liberty Wildlife

Legacu Award

Wishes for Wildlife is the venue for the presentation of the Liberty Wildlife Legacy Award. The award recognizes the accomplishments of an individual, organization or corporation whose endeavors are committed to the mission of Liberty Wildlife. These efforts could range from general conservation activities that better the existence of wildlife, champion the natural resources of the State, promote sustainability or further benefit the environment in some way. The award is focused on leaving a legacy that will endure for our children and countless generations to come.

This year's award was presented to Kathleen Lang who for over twenty years has tirelessly and creatively

guided the Wildlife Guardians in raising funds to support the mission of Liberty Wildlife. She recognized early on that sitting in a mall with a donation jar wasn't the answer to raising the funds necessary to care for native wildlife or to provide free educational programs related to protecting and appreciating wildlife. She had the vision twenty years ago that Liberty Wildlife would grow from caring for 85-100 animals to 4000 and to providing over 800 educational programs annually. In her mind this kind of growth needed support.

Kathleen has been the spirit that initiated the raising of millions of dollars to take care of over 75,000 native animals in the 20 years that

she has been the wind beneath our wings. She has provided guidance on the Board of Directors, to assisting with the Capital Campaign, and to advising the Guardians for 20 years of Wishes for Wildlife.

There is no real way to measure how important she has been for this organization, for native wildlife, or for the environment in general. We proudly recognize the legacy she has created through her dedication, diligence, attention to detail, and her kind and giving spirit.

Congratulations to Kathleen Lang, the 2013 Liberty Wildlife Legacy Award recipient.



Marc Reid, Kathleen (Legacy Award Recipient), Kaitlin, and Tom Lang. Photo by Noah Richman, courtesy of SRP



Wishes for Wildlife



A Grand Gala

The scene is lovely, the night is perfect, let the gala begin! Wishes for Wildlife is just that, a gala to benefit our neighbors, the "Wildlifes." Hosted by Benefit Chairs, Char Hubble and Marc Reid, at the Montelucia in Paradise Valley, the guests were greeted by wildlife ambassadors who were strutting their stuff

with their educator/handler were clearly thrilled. The silent auction was lovely and stocked with treasures from jewelry to experiences, from

> garden items to art, from services to fabulous restaurants. Indeed there was something for everyone to bid on. and bid they did.

Before the quests

were invited into the dinner, they were thrilled by a release of a great horned owl from the resort's second story by Honorary Corporate Chair C.A. Howlett. Magnificently it made a hasty retreat to the Camelback Mountain area to the applause of the resort and gala guests...showcasing the work of Liberty Wildlife to a cadre of excited folks.

Honorary Corporate Chair, C.A. Howlett

The dinner surprise was a cleverly prepared program scripted by Michael Barnard of The Phoenix Theatre, who utilized the Liberty Wildlife Education Team and select Educational Ambassadors to emcee the program. Their script was designed to educate the audience about the beauty, benefits, and dangers that befall our important wildlife neighbors resulting volunteers, and the guests in their need to "visit" Liberty Wildlife for our assistance. They were funny, informative and highly entertaining. The guests, who didn't already know us, certainly do now...a huge success and a fun program, creativity at its best!

> The Live Auction lived up to its name. It was lively, with unique items including a gourmet meal prepared in your home, a house boat party on a beauty of a boat, beauty services for a year, fly anywhere US Airways flies in ultimate luxury to a luxurious hotel, or a day with Bondurant in a High Performance Corvette Z06. There was something for everyone!

Mark next year's event on your calendar now. Don't be left out. Join us on Saturday April 12, 2014 at the Montelucia Resort for an opportunity to support the mission of Liberty Wildlife....and see eagles, hawks, owls, falcons, and a reptile or two, so closely you will never forget it!

Life Prospers

continued from page 3

When the soil is bone dry desert plants drop their leaves altogether, assuming dormancy. With just a little rain these plants are quick to green up and set flowers and seeds that provide nutrients for birds and mammals.

Animals of the desert also have developed adaptations that allow them to get by on very little water. Nocturnal critters like ringtails and kangaroo rats protect themselves from the parching heat by coming out only at night. Others seek shelter in microclimates such as shaded, rocky crevices or burrows where the air is relatively cool and damp. Pocket mice and kangaroo rats drink no free water and eat only

seeds. Seeds stored in these animals' burrows absorb up to 30% of their weight in humidity. Pack rats, cactus mice, javelina, jackrabbits, and pronghorn antelope feast on juicy cactus pads and fruits. Elf owls get their water from a diet of katydids and scorpions. A host of insects provide moisture for birds, reptiles and mammals.

This summer's sporadic and localized monsoon rainfall was typical of the low desert. Water pulled from the soil through the hair-sized roots of native plants infused the blood and tissues of healthy animals. This plentiful source of primary protein enabled success-

ful hunting and procreation for an abundance of predators including owls, hawks, kit foxes and coyotes. In this way the desert's precious water and nutrients are passed around so all can share.

What nature lover doesn't thrill to the sight of a crystalline lake set amidst evergreen trees? But this picturesque setting requires months of rain and snow. An appreciation for the desert ecosystem encourages an understanding of the web of life and the miraculous nature of water. It reminds me of the single grain of rice placed into the pot of the good hearted woman who fed the entire village from her plenty.

Adaptations to Arid Habitats

Desert animals survive in their environment through adaptation. Here is an activity that compares how effective different adaptations are at helping a species to conserve water.

You will need four sponges soaked in water to represent your arid "animals."

Your task is to design an experiment to measure how much water your sponges lose under various conditions that represent different adaptations.

You need to weigh the sponges before and after the experiment so that you can record how much weight (water) each has lost.

Below are some adaptations common to desert animals. Many find shade or a burrow for protection from the heat to reduce water loss. Some have waterproof skin that retains water very well.

Questions to be completed before you start:

- 1. What is the purpose of including Sponge 1 (with no adaptations) in the experiment?
- 2. How will you ensure that this experiment is a fair test?
- 3. Which sponge do you think will lose the most weight (water) and why?
- 4. Which sponge do you think will lose the least weight (water) and why?

Questions to be completed at the end of the experiment:

- 1. Which sponge lost the most water? Which sponge lost the least?
- 2. Do these results match your predictions?
- 3. How do these results relate to the adaptations that help animals and plants survive in arid habitats?

	Adaptation	Start Weight	End Weight	Weight Lost
Sponge 1	None			
Sponge 2	Shade			
Sponge 3	Impermeable (waterproof) skin like plastic wrap			
Sponge 4	A burrow-like enclosure			- 0

At the end of the experiment, calculate the total weight (water) lost for each sponge and fill in the results table.

Goshawk

darker on their back and head. Fittingly, those inexperienced yellow eyes darken year by year, until finally

continued from page 21

eyes darken year by year, until finally resting at a deep blood red. Not only are accipiters beautiful to behold, but they have a look that well suits their predatorial intensity.

Since they look so much alike, size becomes the only true way to tell them apart. Thankfully, the difference is dramatic. Sharp-shinned hawks are among the tiniest raptors. Females are typically larger than males in bird of prey species, and a female Sharpshinned might weigh in the 200 gram range. A female Cooper's hawk, by contrast, might reach 700 grams, but many males are small enough to be nearly indistinguishable from female sharp-shinned hawks. There are subtle clues available, such as the fact that the Cooper's hawk's tail has a rounded tip as opposed to the Sharpshinned's squared look, but size is the only obvious go-to available to identify them at a glance. Fortunately, the

northern goshawk towers over its relatives. Goshawks are equivalent in size to the large red-tailed hawks that we commonly see throughout the nation; female goshawks can weigh in at 1,300 grams or more. That massive frame, compared to other accipiters, gives the goshawk a unique advantage: a larger, stronger body means a bigger variety of prey. Goshawks are still bird killers, but whereas the lesser accipiters must make do with songbirds, the goshawk can kill grouse. Goshawks can also, because of their strength, take on mammals. Even though terrestrial prev species might not demand the same level of acrobatics as chasing down a fellow bird, goshawks still display that typical accipiter ferocity in going after them. According to Cornell University, one particularly determined northern goshawk was observed chasing a snowshoe hare around a hedgerow for nearly an hour, until the unlucky hare finally made a wrong turn and found itself lunch.

Cooper's and sharp-shinned hawks are far more common throughout Arizona, and indeed, they are among the most prolific birds in North America. Their preferences for high elevation forests isn't as overriding as that of the goshawk, and many of those smaller accipiters have readily adapted to living around people. Human habitation tends to attract many small birds, after all, and that means a constant food source for enterprising bird killers. That the goshawk hasn't followed suit makes it all the more impressive to see, an otherworldly forest ghost as much as it is a bird of prey. There may be no raptor in the United States that is both so beautiful and so hard to find. Any glimpse, however, even a fleeting peek at a gray blur rocketing through the branches, is well worth the wait.

YOU CAN help Liberty Wildlife be a big-bucks winner by making a pledge in the "Birdies for Charities" competition at the 2014 Waste Management Phoenix Open! Please see www.libertywildlife.org for more details and to complete the pledge form online.

2013 Birdies for Charity event



Jan Miller, Phoenix the golden eagle, and official from Birdies from Charity event



Peggy Cole and Salsa the Harris' hawk with tournament attendee



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Did you receive more than one copy of WingBeats? Help us to conserve by letting us know!

Printing courtesy of





Join or renew!

It is with your help that Liberty Wildlife has furthered wildlife conservation through quality rehabilitation, education, and consultation services. Because of your support and your interest in aiding wildlife, we hope that we can count on you to help us continue these programs.

Maybe it's a good time to add a gift membership for a friend – or maybe raise your own membership level.

Fledgling and Explorer level members will receive the *WingBeats* newsletter electronically. Guardian and above will receive a paper copy of *WingBeats* unless requested otherwise.

Cut along the dotted line and mail with check to: P.O. Box 14345 Scottsdale, AZ 85267

Annual	Mem	bersi	hip
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- \$25 Fledgling
 Supports the Orphan Care
 program

 \$50 Explorer
- \$50 Explorer
 Provides funding for a school
 or youth Education program
- \$100 Guardian
 Provides funding to support
 the activities of the Wildlife
 Guardians
- \$250 Naturalist
 Provides funding for medical supplies for wildlife in our care
- \$500 Conservationist
 Provides funding for major
 equipment, such as brooders
 - \$1,000 Steward
 Provides funding for
 technology to aid Medical
 Services and Education
 programming

My membership ______

Gift membership ______

Total enclosed ______

My Membership

Name ______

Company _____

Address ______

City_____ State __ZIP____

Phone ______

Email ______

Gift Membership

☐ Contact me about volunteering

Name		
Company _		
City	StateZIP_	
-		





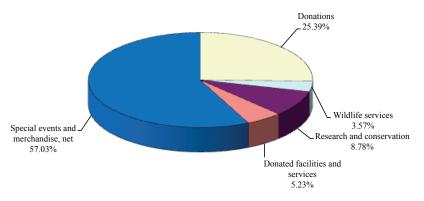


Liberty Wildlife Annual Report 2012

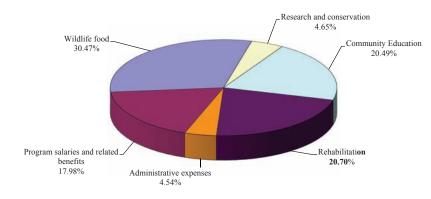


ANNUAL BUDGET

2012 Operating Income



2012 Operating Expense



Liberty Wildlife Operating Income and Expenses For the Year Ending **December 31, 2012**

Operational Income:

Donations	\$ 198,150
Wildlife services	27,861
Research & Conservation	68,522
Donated facilities and services	40,808
Special events	
and merchandise (net)	445,153
Total Operating Income:	\$ 780,494

Operational Expenses

Operational Expenses:	
Program salaries	
and related benefits	\$ 78,653
Wildlife food	133,326
Research & Conservation	20,354
Community education	89,661
Rehabilitation	95,654
Administrative expenses	19,864
Total Operating Expenses:	\$ 437,512
Operating income in excess of expenses:	\$ 342,982
Capital Campaign Contributions:	\$ 1,573

Conservatively, the value of volunteer time donated: \$1,866,579.12* (84,308 hours of volunteer time x \$22.14 per hour)

Liberty Wildlife Goes Grocery Shopping for Animal Food

Crumble	1,750 lbs.	Carnivore diet	42 lbs.
Seeds	2,000 lbs.	Trout/caplain	1,564 lbs.
Worms	424,000	Minnows	35,000
Crickets	108,000	Guinea Pigs	450
Mice	12,850	Fruits and Vegetables	3,888 lbs.
Rats	2,375	Scratch	800 lbs.
Rabbits	310	Exact tube formula	88 lbs.
Quail	6,542	Eggs	6,048
Chickens	980		

Photos on Cover (left to right):

Bald eagle - photo by Terrry Stevens Northern harrier photo by Christy van Cleve Ferruginous hawk - photo by Terry Stevens Bottom: Cooper's hawk photo by Kenny Wilkins

Photos on Back (left to right):

Golden eagle - photo by Kenny Wilkins How am I doing, Dad?, bald eagles photo by Terry Stevens Ferruginous hawk - photo by Terry Stevens

Department Statistics for 2012

Medical Services, Daily Care and **Orphan Care:**

 Total baby animals assisted 	2,597
 Total native animals assisted 	3,339
 Number of species (see next page) 	113
 Highest intake month - May 	753
Total volunteers all shifts:	
Medical Services	58
Daily Care	84
Orphan Care	65

Additional Support:

Hotline volunteers	28
 Rescue & Transportation volunteers 	110
 Research & Conservation volunteers 	3
 Cooperating veterinarians 	6
 Wildlife Guardian volunteers 	40
 Scientific Advisory Board 	4
 Non-Eagle Feather Repository Board 	5
Publications volunteers	7
 Board of Directors 	15
 Advisory Board of Directors 	16
• Total volunteer jobs	517

Education:

- 827 programs
- 575 community venues, including schools, scout groups, etc.
- Total audience of 144,644
- 1566.33 hours of scheduled programs
- 1979.40 hours traveling to and from Liberty Wildlife
- 21,266.10 total number of miles driven to program, leaving and returning to Liberty Wildlife
- 56 active volunteers
- 59 Education Ambassadors
- 28 different species represented
- Flighted program including 7 birds in training
- 4 raptors working for over 25 years
- 15 trained eagle handlers
- 22 hand feeders



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Harris' hawk photo by Christy van Cleve

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^{*}Based on documented volunteer hours and figures from Independant Sector research.

List of Species Assisted

bald eagle golden eagle California condor Abert's towhee American coot American kestrel American white pelican Annas hummingbird ash-throated flycatcher barn owl black-chinned hummingbird black-crowned night heron black-headed grosbeak Brewer's sparrow bronzed cowbird brown pelican brown-headed cowbird burrowing owl cactus wren Canada goose canvasback canvon wren chimney swift cliff swallow common merganser common moorhen common nighthawk common poorwill common raven Cooper's hawk Costa's hummingbird

curve-billed thrasher double-crested cormorant eared grebe elf owl Gambel's quail Gila woodpecker gilded flicker great blue heron great egret great horned owl greater roadrunner great-tailed grackle green heron Harris' hawk house finch Inca dove killdeer lark sparrow lesser goldfinch lesser nighthawk Lincoln's sparrow long-eared owl MacGillivray's warbler mallard merlin mourning dove neotropic cormorant northern cardinal northern harrier northern mockingbird orange-crowned warbler osprey

Pacific loon Peregrine falcon pied-bill grebe prairie falcon red-naped sapsucker red-tailed hawk ring-necked duck ruddy duck Say's phoebe sharp-shinned hawk snowy egret Swainson's hawk turkey vulture verdin violet-green swallow western grebe western kingbird western screech owl western tanager whip-poor-will white-crowned sparrow white-faced ibis white-throated swift white-winged dove Wilson's warbler yellow rumped warbler vellow warbler zone-tailed hawk

Mammal Species: cotton tail rabbit

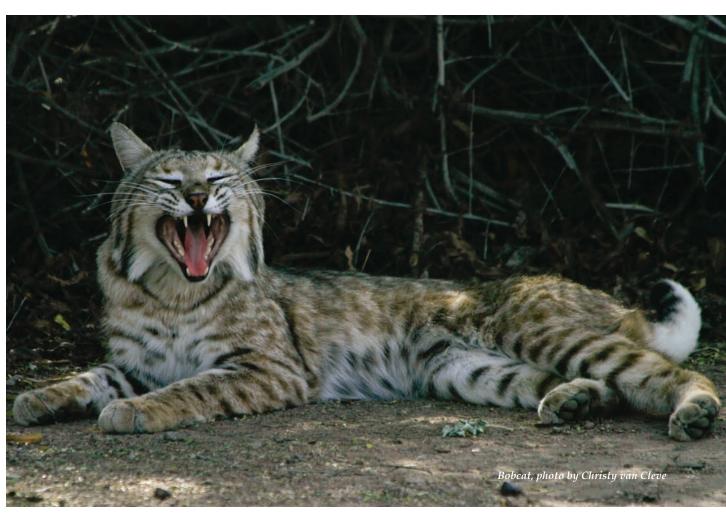
jackrabbit
bobcat
coyote
grey fox
packrat
round tailed ground
squirrel
rock squirrel
antelope ground
squirrel
striped skunk
spotted skunk

Reptile Species:
Clark's spiny lizard
desert tortoise
gopher snake
common king snake

Clark's spiny lizard desert tortoise gopher snake common king snake spiney lizard whipped tail lizard night snake western diamondback snake

black-headed snake

Amphibian Species: regal horned toad Sonoran desert toad Couch's spadefoot toad



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