

# WingBeats



A publication of Liberty Wildlife

## HOPE

### Precious Cargo

On Monday, May 8th, the chick began the arduous attempt to escape the depleted air sack and make her way to freedom.

by Jan Miller and Megan Mosby  
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# *from the* **Director's Chair**



I live on an acre of land in central Phoenix. I have lived in the same house since July 4, 1976...auspicious if you were around for the Bicentennial year...I am indeed a very lucky person. For many reasons, I love where I live and have no intentions of leaving. I obviously have human neighbors, most of whom I have known for a while, and I am, for the most part, very fond of them. Everyone appears to respect the solitude of others.... and that is a good thing.

I also have wildlife neighbors. This issue of WingBeats honors all of our urban wildlife for the beauty, benefits and entertainment it offers to enrich our existence. For the most part, I love them all. Even the annoying mosquito or ant has a purpose...although it might be a stretch to applaud it.

This issue commends the work done by many caring people, from a Liberty Wildlife volunteer to the likes of the biologists on the California Condor Recovery Team. We applaud all of you who go beyond the call to support either the animals that grace your surroundings, or those who work to save a species like the California condor, too large to do the neighborly thing but grand enough to grace the skies and the wild lands they call home.

For you who don't understand urban wildlife or who might even deny its ex-

istence, follow along and see if you find more recognition of the visitors to your space. Perhaps it is a high-rise in downtown...bet'cha there is a falcon or for sure a pigeon to watch. If you live in a condo, there will certainly be song birds outside your window and a cottontail or a covey of quail in the shrubs. Or, if like me, you have some land around your dwelling, you might have anything from a symphony to a cacophony of activity and sounds harkening the presence of urban wildlife. Learn to embrace it, and the payoff will be worth it.

Read on to find out about the importance of having wildlife neighbors at all, and if you don't already know, tune in to what they add to the wholeness of our space on this planet. Find out how to attract them, if you are missing this amenity and how to keep them healthy and thriving when they grace your surroundings. It is the least we can do for them.

I am keenly aware of the cycles of the day, the seasons and the years all due to the presence of wildlife in my orb. Migration brings the hooded oriole into my neighborhood to breed. Feeding hungry babies sends the roadrunners out to scarf up the plethora of grasshoppers that showed up just in time. The rhythm of the day and night are broadcast as the critters at my fountains drink for the last time of the day or for the first time of the night. Even

the most nocturnal show up secretly, unknowingly revealing themselves to me as I quietly observe their habits.

But the most important thing for us to remember is that all of us, wildlife included, benefit from each other if we are respectful. We are all connected in this web we know of as NATURE. At Liberty Wildlife, we encourage all of you to introduce your children to the natural world so that their appreciation is reflected in how they look forward to their own futures. There will always, if we are supportive, be more in life than screens, electronics, video games, and Artificial Intelligence. And, we can hope that we will always find ways to use the technical world we have created to make our lives richer, nature more vibrant, and wildlife more secure.

Megan Mosby  
Executive Director



## Avian Flu

The need to protect these beautiful creatures from this devastating disease.

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Spotted towhee  
Photo by Rodrigo Izquierdo

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Red-shouldered hawk  
Photo by Ceci Hampson-Ellis

# Precious Cargo

## A California Condor

Photo by Karine Aigner

By Jan Miller and Megan Mosby

In the spring of 2023, the California condor faced another threat to the survival of the species. HPAI, highly pathogenic avian influenza, struck the Arizona/Utah flock of highly endangered birds. The California condor biologists scrambled to collect as many of the sick and dying condors as they could. They were able to locate many based off their GPS or telemetry trackers that each bird wears on its wing. The clock was ticking to save these charismatic birds.

On March 29th, it was noticed that condor #316 was acting strange and not moving. She was rescued and brought into Liberty Wildlife to be triaged and placed in quarantine with other condors that were suspicious of having HPAI or had tested positive. She put up a good fight, but eventually succumbed to the disease despite the heroic efforts to try to save her.

During the time she had come into Liberty Wildlife, the field crew at the Vermillion Cliffs were keeping a close eye on her mate condor #680. It was thought that #316 had been showing signs of pos-

sibly laying an egg prior to her exit from her cliff nest and falling ill. By the male's behavior, it was pretty evident that he was attempting to brood an egg. That is when the condor team and Liberty Wildlife staff discussed what would be the best course of action and decided to give the father a chance at survival by removing the egg and bringing it to Liberty Wildlife to incubate.

The egg was carefully removed from the cave when the father left momentarily. It was picked up from Peregrine Fund biologists in Flagstaff by a Liberty Wildlife volunteer and carefully brought to our facility. We have never incubated a California condor egg, but have been successful with many other raptor species. It was a whole new experience for us. The egg, too big to fit in traditional brooders that automatically turn the egg, had to be physically turned six times a day, temperature and humidity also had to be artificially regulated

by staff at Liberty Wildlife. We candled the egg at several different intervals and showed staff and veterinarians the progress of the chick (candling is a method to watch the development of the baby while still in the egg).



Dr. Lamb wears camouflage to give the hatchling her first medical exam

Photo by Barb Del'Ve

On Monday, May 8th, the chick began the arduous attempt to escape the depleted air sack and make her way to freedom. The chick was right on time, approximately 57 days from when the condor biologists had thought the egg may have been initially laid. The chick pipped out of the end of the egg instead of the side which meant that this chick was in the wrong position. This meant that this chick had to have an assisted hatch. Dr Stephanie Lamb took the lead to help hatch the chick. Once hatched, we tested for HPAI to be sure it had not been passed on to the chick. We went to great measures feeding and caring for the chick by taking special care not to speak, to wear camouflage, and use a puppet while feeding to insure the chick did not imprint on humans. Once testing proved to be negative for the virus, plans were made to make the trip to Boise, Idaho. It would be placed with foster parents at The Peregrine Fund propagation center.

The future will depend on many things. As long as the rearing with the foster parents goes well and genetically the chick is a good mix in the population, it is hoped she will be released back into the Arizona/Utah flock in 2024.

We did DNA testing on the chick and found out that it's a girl. This is an incredibly important factor since 11 of the 22 condors lost to HPAI were female. Females don't reach breeding age until they are between 6-8 years old, and they only lay one egg every other year. This makes replacing the loss a long process. Great efforts have been made in the past to bring this flock up to 117 before being struck by the HPAI virus, only to see them devastated in one season. Vaccination efforts are being tested at the time of this article and it is hoped this will be the relief needed in the case of another outbreak of this deadly virus.



*Above and below:  
Hatchling, condor  
1221, cuddles  
with temporary  
surrogate mother.*



*Left:  
Dr. Lamb moves  
the hatchling to  
a safe carrier for  
the journey to a  
new family.*

*Photos by:  
Barb Del'Ve*

Milagra (Condor 1221  
aka Miracle) is our  
**HOPE** for the begin-  
ning of this important  
recovery. She will carry  
a huge burden on that  
9.5 foot wingspan.

*Photo by:  
Barb Del'Ve*



# The Burrowing Owl

## and Urbanization

By Melinda Miller, Assistant Orphan Care Coordinator

If you drive along agricultural fields often you most likely have passed a burrowing owl at some point. They blend in very well with their surroundings and can be hard to spot if you do not know what you are looking for. Unlike most other owls, they are active during the daytime and live underground (or in a “burrow” of some sort).

Normal burrowing owl habitat consists of open areas, such as fields, so they can easily see their prey and any likely predators. In areas untouched by man, they inhabit burrows dug by mammals or burrowing reptiles. Unfortunately, within Phoenix and the surrounding valley,

much of the once available open land is now being used for housing or commercial development. The owls have had to adapt. As a result of their adaptation, they have been known to use holes underneath sidewalks or curbing where the ground has eroded, as well as drainage pipes as their “burrows.” They are very resourceful birds, and if there is enough food (bugs and small rodents) nearby, and a hole just large enough to accommodate an owl and a potential family, they will use it.

However, by the owls choosing some of these odd areas to live, they can be put in danger. Construction of new buildings, parking lots, playgrounds, and the like, can destroy the owl’s home, and potentially threaten the life of the owl if it is inside its burrow during construction. This is where Liberty Wildlife comes to the rescue. Liberty Wildlife has been granted special permission to remove and relocate burrowing owls once the construction company has obtained a removal permit. The construction area is first surveyed for owl activity by looking for the presence of owls and searching for active burrows. A burrow can be considered potentially active if there is whitewash, from their feces, on the outside of the burrow. Burrowing owls are also known to leave animal dung at the entrance to the burrow to deter predators from entering.

If it is determined that the upcoming construction will not endanger any active burrows, and therefore the owls, then the owls will not be removed. If it is determined they are in danger, they will be humanely trapped by Liberty Wildlife and relocated to a safe area. Sometimes the area they are translocated to will have natural burrows; sometimes there will be man-made “burrows” which are made with large, flexible pipes buried into the ground. The man-made burrows provide them with the same protection as a natural burrow would.

Take a look next time you are near an irrigation ditch. You never know who may be living there. If you do come across a burrowing owl or burrowing owl family, please keep a distance of at least 100 feet in order to not disturb the owls. Binoculars and scopes are great tools to aid in observing these very charismatic birds.



*This burrowing owl made its home alongside a road, inside an irrigation ditch.*



# Education

by Laura Hackett, Biologist,  
Education Coordinator

Photos by Laura Hackett



These last few years have been quieter than usual at Liberty Wildlife. Not in terms of patients coming in for care—that number hit a record high! But the number of education programs offsite and onsite dwindled while people were still unable to attend social gatherings. This year we have finally seen an uptick of visitors and the return of larger school groups to Liberty Wildlife. What's funny about all these kids that were “stuck at home” during the pandemic is that it was actually the perfect time for them to explore the wildlife in their own backyards.

That is exactly what Liberty Wildlife is—a microcosm of the nature of Arizona. We intentionally planted a variety of vegetation to demonstrate the different strata found in parts of Arizona. You'll see the typical desert scrub, but also take a breathtaking moment when you stand by our wetlands and observe the riparian species, the gray hawks, alongside it.

And now the thunderous sounds of kids' voices have returned, like a long-awaited migration, back for field trips to

Liberty Wildlife. We see small home-school groups, micro-schools all the way up to larger traditional grade schools and even college classes. We're a small campus, but we pack a lot into the 1.5-2 hours they are on site. The visit includes a tour of the campus to explain our history and mission, what they can see in the windows of our hospital, and the Non-Eagle Feather Repository. Obviously, our guests get to come face-to-face (beak?) with many of our native animal ambassadors, ranging from American kestrels to bald eagles, and even some reptilian and small mammal species that reside in the Interactive Lab.

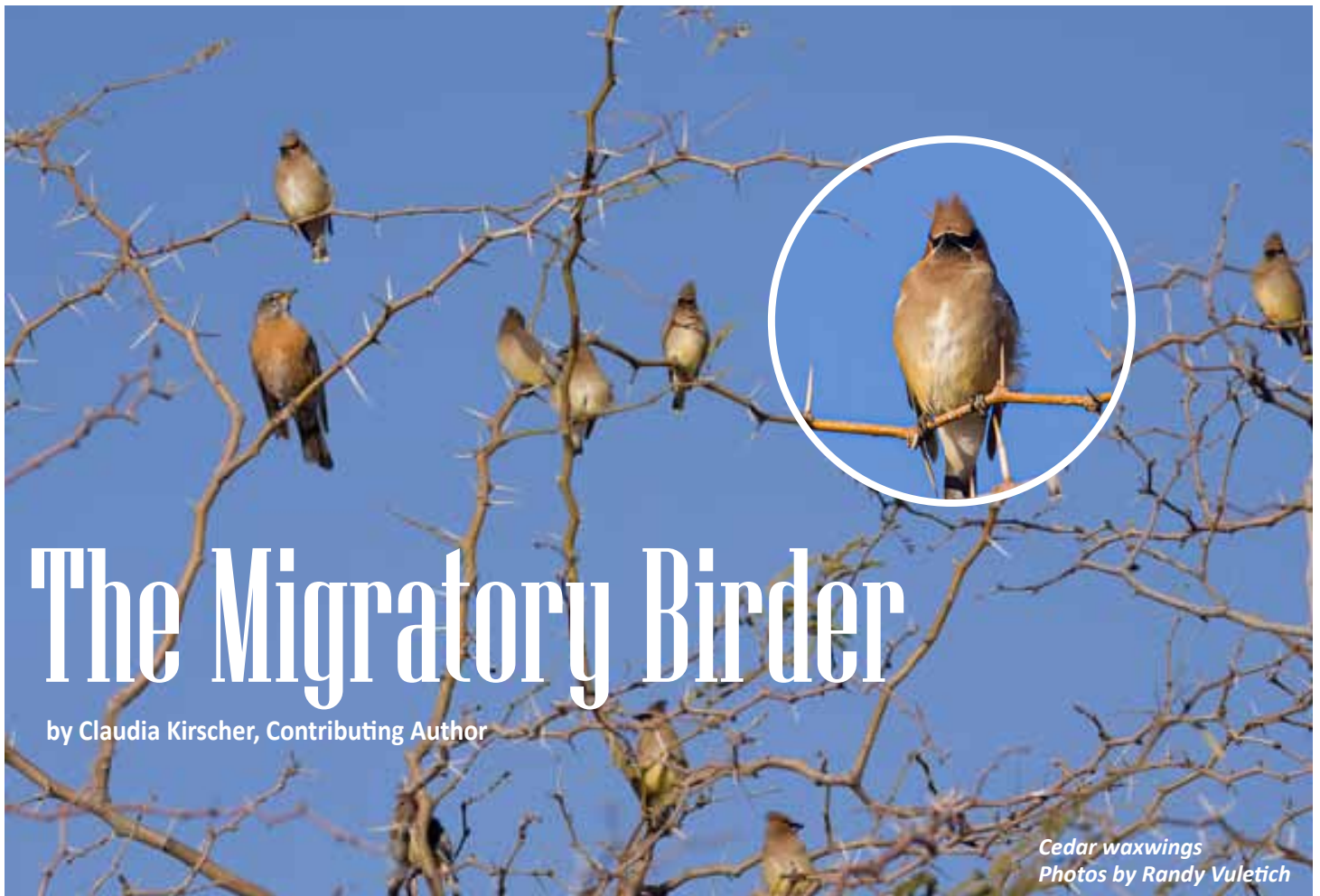
Half-way through the field trip, I ask the kids to look around. They've been in this small world of feathers and fur, but I ask them to look past the fence or think of what they saw as they were driven up to our parking lot (and maybe assumed the bus driver had made a wrong turn). We are surrounded by a gravel pit to our south, commercial businesses to our east and west,

and the I-10 freeway and Sky Harbor airport are in view to our north. Yet, when the team was searching for the “perfect” location to put the Rob and Melani Walton Campus of Liberty Wildlife, they settled here. Then, I ask the children to look past the fence, but not quite as far as the highway. In that narrow stretch lies the Rio Salado Habitat Restoration area, which encompasses approximately five miles of riparian habitat. From our vantage point, we have seen bald eagles and osprey fly over, swallows swoop at dizzying speeds and turkey vultures soar high overhead on the wind. We have seen bobcats casually walk through our amphitheater and easily jump the fence to the river. Nightly, we hear great horned owls hoot overhead and coyotes howl from beyond. The city is alive with wildlife.

This is what I want the children, and all guests, to take home. We have landed ourselves in the wild, created a large city, and yet, the wildlife that was here is still here among us. It is the job of the humans to find a balance where we can survive without further damage to the fragile ecosystem that truly surrounds us wherever we set foot. By teaching that to the younger generation, we hope that they will have formed a connection to nature while at Liberty Wildlife, and they will travel into the future to help speak for the animals, the habitat, and the Earth.







*Cedar waxwings*  
*Photos by Randy Vuletich*

Our Arizona cities, townships, and countryside abound in wildlife waiting to be discovered and enjoyed. There are estimates of 138 species of mammals, 107 species of amphibians, 106 species of reptiles, and over 560 resident and transient bird species.

A particularly magical time of year to observe birds is during migration. Birds migrate twice a year, northward in the spring to find available and suitable nesting sites and then south in the fall for food as the prey in cold northern areas diminishes. On their journeys, they utilize our urban landscapes and outlying areas to rest and refuel before moving on; some linger and some stay. The city attracts many because of greenbelts and readily available water (and resultant abundant rodents, birds, plants, and insects).

Arizona is a migratory pathway for raptors, waterfowl, and passerines (i.e. warblers, songbirds). There is the occasional vagrant from the far reaches of the Americas or other continents. The majority are on their way to and from Central and South America.

The Swainson's hawk has one of the longest migrations of 12,000 miles round trip from Canada to Argentina. They pass through Arizona and often stop to feed and rest in our agricultural areas. Some stay and become nesting residents.

Most warblers, such as Lucy's and yellow warblers, have traveled from Central and South America to breed in the U.S. and Canada. There have been a handful of record sightings

of blackpoll warblers in Arizona (flying from Denali, Alaska to South America in the fall and returning in the spring, often flying nonstop for 72 hours).

The turkey vulture flies to South America for the winter. Even that red-tailed hawk you saw recently on a telephone pole might have come from as far away as Alaska or Canada (Oct-Feb).

Rarely, common and Pacific loons are seen almost every winter in Arizona on lakes, rivers, community ponds, and golf courses. They breed in Alaska and winter all the way south to Baja California.

Arizona also sees irruptive migrations which occur some years when a species migrates to an area in large numbers based mainly on poor northern cone and seed food supply rather than a hormonal change. This past winter, our state saw large numbers of American robins, evening and yellow grosbeaks, Townsend's solitaires, and Cassin's finches. A few years ago, we were treated to red crossbills and red-breasted nuthatches (even in the Glendale/Peoria area).

For those who love nature, stunning scenery, diverse habitats filled with the wonder of wildlife and birds, take the time to stop, listen, observe, and delight in what is around you, whether resident or migratory, visitor or vagabond. Enjoy the parade!



# Ways You Can **Support Our Mission**

## It Starts With You

by Chris Sar  
Development Consultant

Every day someone finds a small bird in their own yard that is in distress. They pick that animal up and put it in a small box. They drive to Liberty Wildlife, and wait under the awnings in the line along our intake walkway to hand the animal off for care. Then they do the next most crucial thing... they make a gift to help provide for the care of that animal.

The stories all follow that basic format. Sometimes it is a person who is rescuing a bunch of bunnies from the parking lot at their work. Sometimes it is a person driving home from vacation and stopping to rescue an owl or hawk that has been struck by a car on the Interstate. But whatever the start of the story, it ends with them arriving at our intake window and seeking help to care for that fragile, broken, or orphaned wild animal.

And it was true again this year. Just like it's true every year. Our largest single source of donations come from people who drop off an animal at our intake window. In fact, over two-thirds of all the gifts we receive each year happen during the intake process, at our intake window. The truth goes much deeper than this statistic—we simply could not do our work each and every day without that support.

The gifts vary greatly... from children bringing in their allowance in a jar, to some longtime supporters leaving a gift in a will.

Regardless of the type of gift, individuals have always been the biggest single source of support for the services provided at Liberty Wildlife.

Several donors to our capital improvements and additions have been recognized with new signage and plaques on enclosures and other signage on the campus. There are still many opportunities, and over a million dollars in potential projects on our “wish list” as we build out different aspects of Liberty Wildlife. Details of these opportunities are subject to change, with the latest information available through the development office: [development@libertywildlife.org](mailto:development@libertywildlife.org).

And still, other donors have designated a gift to Liberty Wildlife through their will or estate plan. These donors become Wings of an Eagle Legacy Society members. Joining is easy—simply add Liberty Wildlife (Tax ID 94-2738161) as a beneficiary (either a dollar amount or a percentage amount) in your will, trust, insurance plan, retirement account or other account. In many cases this can be done in an online form, or with a single sentence added to your will or account.

Donations allow us to continue to provide these important services.



*A volunteer working at the Intake Window*



*Exterior view of the Intake Window*

Photos by Acacia Parker

# Avian Influenza

by Stephanie Lamb, DVM

“

It's surely  
our  
responsibility  
to do  
everything  
within our  
power to  
create  
a planet  
that  
provides  
a home  
not  
just for  
us, but  
for all  
life on Earth.

David  
Attenborough

Avian influenza has been in the news, in blogs and social media posts, and on the minds of anyone involved in wildlife rehabilitation lately. But what is this disease and what does it do? Why are wildlife rehabilitators and conservationists concerned about it? Let's get into the details of this disease so that we can all better understand what this ailment is all about.

Avian influenza includes several viruses of the Orthomyxoviridae family that affect birds and mammals. They can be considered highly pathogenic, meaning they cause severe disease, or low pathogenic, meaning they may cause minimal to no signs of a problem. You may hear the letters "H" and "N" followed by numbers when this virus is described. This is a classification that helps determine the pathogenicity of the virus. For example, the current strain we are dealing with is called Avian Influenza H5N1, and it is considered highly pathogenic. You may also hear of it more simply by the name, Highly Pathogenic Avian Influenza, or HPAI.

As a virus, it will attach to a host animal's cell where it gains entry and then takes over the cell's machinery, making it work for the virus and not as well for the animal. The main cells it infects are those of the respiratory, gastrointestinal and nervous systems. Depending on how much damage it does will determine the extent of the signs that are seen. If it damages the respiratory system an animal may have signs like ocular and nasal discharge, sneezing and coughing, open mouth breathing, or even severe respiratory distress. If it affects the gastrointestinal system, they can have problems like inappetence, diarrhea, vomiting or

regurgitation. When the nervous system is affected, an animal may just act "dull" or depressed, have generalized weakness, poor use of its limbs (paresis or paralysis), or even have seizures. Other systems can be affected as well including those of the ocular, renal, or hematopoietic (blood and lymph) systems. When these are affected, it can cause corneal edema (a blue haze to the eye surface), or an enlarged liver or spleen.

An animal does not have to have all the signs of influenza when it gets ill from the virus. Some will have signs involving multiple systems while others may only show signs involving one system. Sadly, there are some cases where the virus takes hold so quickly that the animal may show very minimal symptoms that are vague, such as just acting tired, and then pass away.

With the birds that came into Liberty Wildlife with HPAI we saw a variety of these signs. Some were just weak and anorexic. Others developed corneal edema on the eyes. One presented with seizures while another developed weakness and paresis. Almost all were thin and underweight.

Diagnosis of this virus involves taking a swab of the ocular, respiratory or gastrointestinal system. When swabbing an animal for this virus we are looking for DNA from the virus. An animal can also be tested for this by performing a blood test to look for antibodies (known as a serology test) or if an animal dies, they can have histopathology done to look for evidence of the virus.

Treatment is difficult with HPAI because it mainly involves using supportive care techniques along

with the individual animals' immune system responding appropriately against the virus. Supportive care can include fluids to help maintain hydration, vitamins to stimulate appetite and support the body, and anti-inflammatories to help mitigate some of the inflammation the virus causes. Antiviral medications are possible to use, but their use is controversial as their efficacy and consequences are unknown. Sometimes, animals with this virus have other diseases at the same time because their immune system is not able to keep other problems in check which means an animal with HPAI may need to receive medications, like antibiotics or antifungals.

Ultimately, some animals will have a strong immune system, mount a response to the virus, fight it off, and survive. Other times, despite everyone's best efforts, animals will pass away from this disease. It has been said that highly pathogenic strains of avian influenza can cause death in 50% or more of the individuals it infects. This has the potential to be devastating for populations of animals, with endangered species being the most concerning for conservationists.

Thankfully, there is always a light at the end of the tunnel and vaccination against this current strain of H5N1 avian influenza has been created and authorized for use in the endangered California condors to help prevent losses. Efforts to get this vaccine out to birds are underway and with hopes that it can help us combat this deadly disease.



# Room for Nature

All Around



by Gail Cochrane, Contributing Author

Scott's oriole

Photo by Ken Hauser

Most of us these days live in cities or suburbs. We move about on sidewalks, streets and freeways. Strip malls, schools, medical centers, and giant shopping complexes hold the amenities that anchor our lives. Unfortunately for the natural world, these built structures consist of impervious surfaces where little or nothing grows.

Yet, pressing close around our homes, commercial spaces and roadways are permeable areas that are not biologically barren. We have backyards, gardens, patios, parks, HOA common areas, roadsides, and vacant lots that still support nature on some level. We can deepen the biodiversity and natural value of this land.

These patches of habitat are a glimmer of hope for species under duress. A 2019 article in the magazine *Science* stated bird numbers across North America have fallen by 2.9 billion since 1970. Pollinators and other insects also face declines due largely to habitat loss and pesticide use. Even a single native tree can be an island of life, from the network of microbes among its roots to the insects and birds that thrive in its canopy. A garden or backyard planted with native species and providing water and shelter for wildlife is a living, breathing community. These environments encourage biodiversity among

microorganisms in the soil and on up the food chain. Many pieces of revitalized land in proximity provide a network of habitat accessible to pollinators, birds and drifting seeds.

Lawns, artificial turf, hardscapes, pesticides and sterile hybrid plant species all work to defeat biodiversity. By contrast, native plants have age old relationships built on mutualistic interactions with local pollinators, birds, mammals and microbes. As an added benefit to homeowners, native plant species growing in a backyard require no fertilizers, no pesticides, and little added water.

To deepen and widen our reconnection with the natural world, we can integrate the principals learned in our backyard ecosystems into designs for parks, suburban common areas, city open spaces, and private land. Even commercial farms can be redesigned to provide habitat or migratory corridors for wild species.

*"...we are seeking to reclaim, and in many ways create anew, a body of knowledge that ties us to the natural world and that engages all dimensions of human knowing – intellectual, spiritual, philosophical and practical – informing a connection to the natural world that is creative, intelligent, earthy, wild and beautiful."*

—Lyanda Lynn Haupt in *Urban Bestiary*

Only a few generations ago, as rural people, we were immersed in careful observation of natural cycles such as rainfall and drought, seasonal shifts in temperature and day length, and even the turning of the moon. Our own survival and the health of our crops and animals were profoundly affected by natural conditions. Knowledge of local plants, wildlife and soils were intrinsic to day-to-day life. Our folklore and customs were deeply steeped in nature. Now, by contrast, nature is a remote place that we try to visit on weekends or holidays. It has become a stretch to realize we are still reliant on natural cycles and biodiversity for our very survival.

Still, beneath our busy, techno-driven lifestyles is an innate capacity for awareness and wonder of nature. Common urban dwellers such as grackles, mourning doves, and coyotes can alert us to nature in our midst. We can connect with other humans over stories of wild animals we see in our daily lives, and the new plants we are trying out in our backyards. We can learn to tune into the nuances of the ecosystems with which we surround ourselves. As stewards of this land, we can help to create a vibrant society of species.

# Orphan Care

A short look at one of  
humanity's oldest avian companions

## *The History of the Pigeon*

by Kathleen Scott, Orphan Care Coordinator

People often associate urban living with pigeons, but not in the magical “spirit of the city” kind of way. To many, they are simply “rats with wings,” one of many blights and vermin found in populated areas. Do they deserve this reputation? Why are they so commonly found in our cities across the world and where did they originally come from? It turns out the simple pigeon has a much longer and storied history than you’d ever expect.

Pigeons, also called rock doves, have an ancient relationship with humans. Originally native to North Africa and the Near East, evidence points to their domestication as far back as 10,000 years ago, potentially beating out the domestication of geese and chickens by 2,000 years. There are surviving written accounts of domestic pigeons by the Ancient Mesopotamians and Ancient Egyptians. A painted mural in the Egyptian palace of Amarna, built during the reign of Pharaoh Akhenaten around 1300 BCE, depicts pigeons in a grassy expanse. Pigeons were originally cliff dwellers, so depicting them out of their natural habitat could potentially point to domesticated pigeons already being a standard sight among everyday ancient Egyptians.

An animal with a variety of uses, pigeons were kept not just for their meat, but for their nitrogen-rich guano. Pigeon Towers, also called dovecotes, were originally built throughout Iran and

Egypt, and gave pigeons a place to roost while also collecting their feces for the fertilization of farmers’ fields. As pigeons have a natural homing instinct, the Ancient Phoenicians are believed to have trained the first messenger pigeons around 1000 BC.

Like any other domestic species, where humans went, their pigeons went with them. Leaving their original range, pigeons spread quickly through Europe and Asia. Ancient Greeks used trained pigeons to send out results of the Olympic games as early as the 8th century BC. Depictions of pigeons can be found in the ruins of Pompeii (circa 1st century AD), and Roman children were known to keep them as pets. Pigeons also have been associated with the Roman Goddess Venus, the goddess of love, most likely due to pigeons’ tendencies to mate for life, be demonstrably affectionate with their mates, and co-parent their offspring. Genghis Khan used trained pigeons to communicate with his generals on the battlefield in the 12th century AD, and pigeons started popping up in the art of China as early as the Song Dynasty (the Emperor Huizong painted “Pigeon on a Peach Branch” in 1108 AD).

In medieval England, at first only royalty were allowed to own and eat pigeons. After protest from the public, the ban was lifted and everyday citizens began raising pigeons. Colonists started bringing

domestic pigeons to the Americas by the 1610s, and it is their feral descendants who are the urban pigeons of which we are inundated with in our cities here in the U.S.



*Painting of “Young Woman Fastening a Letter to the Neck of a Pigeon” attributed to Johann Christian von Mannlich, Germany 1741-1822AD*

In the 17th century, pigeon-keeping for pleasure became popular in the Mughal Empire (which encompassed parts of present-day Bangladesh, India, Pakistan and Afghanistan). Pigeons were trained to perform “fairy-flying,” i.e. aerial acrobatics, and as well as being selected and bred for different colors and plumage. The Mughal ruler Akbar the Great loved pigeons so much that he would travel with his personal



colony of 10,000 wherever he went. It's not surprising, then, that the Mughals created many manuals of pigeon-keeping during this time.

Charles Darwin took an interest in pigeons and started raising fancy varieties in 1855. As Carl Zimmer said in his New York Times article, Pigeons Get a New Look:

*"Pigeon breeding, Darwin argued, was an analogy for what happened in the wild. Nature played the part of the fancier, selecting which individuals would be able to reproduce. Natural selection might work more slowly than human breeders, but it had far more time to produce the diversity of life around us."*

In 2013, an international group of scientists took the next step and mapped the genome of the pigeon. Evidence shows that all pigeons across the world descend from those rock doves first utilized by the Ancient Egyptians and Mesopotamians.

Until the advent of telecommunications, pigeons were the fastest method of

communication. Homing pigeons were used to send messages across great distances and were used both in eras



of peace and wartime. The first aerial photography is credited to them, and pigeons were even used as the original spy drones, sent over enemy lines with cameras attached to their chests during World War I (*photo above*).

In World War II the British and U.S. used war pigeons for communication and reconnaissance, with the Germans even deploying trained falcons and hawks to thwart them. The British subsequently awarded thirty-two pigeons with the Dickin Medal for their service in the war effort.

Today, pigeons' usefulness has been all but forgotten. These feral and highly adaptable birds continue to live alongside us, much to the chagrin of many. True to their original habitat of cliffs, pigeons have an affinity for hard surfaces, so nesting on the side of a building is a completely wonderful place to be, and this appears to be why they've flocked to cities and urban environments.

Throughout history, pigeons have helped humanity in a variety of ways, from assisting with agriculture, communication, and as a food source. Pigeons deserve more credit than they're given. In Orphan Care, we care for countless young pigeons. In a world so angry at pigeons for circumstances out of their control, it's nice to see a little kindness and compassion bestowed on these, our oldest avian companions.

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*An Orphan Care volunteer working with a juvenile pigeon*



# What is Urban Wildlife



by Acacia Parker  
Public Outreach  
Coordinator

It's hard to believe that, once upon a time, humans didn't populate cities the way we do now. Sure, we hunted together, gathered together, and lived together, but nowhere near the sheer numbers of today. Thanks are due to the Industrial Revolution; between 1880 and 1900, nearly fifteen million people flocked to cities all over the United States. Not just immigrants from around the world, almost forty percent of people living in rural areas made the trek for jobs and the hope of a better life.<sup>1</sup>

Yet, despite the convenience of city life, the swift population growth brought its own sort of headache. Things like traffic jams, air pollution, and noise, created a slew of unforeseen problems. And while health officials considered things like what pollution might do to our long-term health or how to deal with sanitation, what lay forgotten inside our concrete jungles were the things we don't always see:

The animals.

At this point, you might be thinking I've lost my mind—people didn't forget about animals! There are tons of doves, pigeons, starlings, and grackles who inhabit cities and their suburbs. There are plenty of rock squirrels and round-tailed ground squirrels, and of course, if you live in the desert, the ever infamous cottontail (who thoroughly enjoy chewing through drip lines whenever they can). But what about the lone coyote you see occasionally strolling through the park? What about cougars and bobcats, who are spotted more frequently on the outskirts of cities? What about bears, who are known to get into trash cans and dumpsters looking for a quick bite to eat?



It's true most people are unlikely to see a cougar or bobcat in their neighborhood if it's located in the middle of a heavy populated area. Even those

living on the border of a city like Phoenix are not likely to ever see animals notorious for being avoidant of human interaction. But that doesn't mean they aren't there, hunting in the pre-dawn hours when our footprints are light, and the world is still quiet. It doesn't mean they aren't learning, adapting, and modifying their behavior to better fit their needs for survival.

Because at the root of it all, that's exactly what they've done—and at an unmatched pace. By its very definition, urban wildlife is “wildlife that occurs within the limits of an incorporated area or in close proximity to an urban area that receives significant impact from human use.”<sup>2</sup> It can even be broken down into groups like exploiters (who take advantage of resources by living among us) or avoiders (those who don't benefit from living within the city but happen to stumble within it).<sup>3</sup>

No matter what category they might fall under, it doesn't dispute they've recognized a basic fact: we can survive together. And, we can do so in a way that benefits both of us, if we're so inclined to listen.

Case in point: all the photos in my article are animals I've seen in my little safe haven of Northern Phoenix. Either in my backyard or in my neighborhood, every single one of these animals is within a mile of my home. From a bobcat to a gopher snake to the

**Urban Wildlife**...continued on page 24



# Midwestern University Veterinary Students at Liberty Wildlife

by Dr. Alexandra Goe, Guest Author

Midwestern University's College of Veterinary Medicine was founded in 2012 and is located in Glendale, Arizona. Students complete a combination of didactic and lab-based educational training during their first three years, and then embark on approximately fifteen months of clinical training before graduation. In their clinical year, students take part in required rotations in areas like primary care for dogs and cats, anesthesia, surgery, and pathology. They are also given time for elective rotations, selected based on the interests and goals of each individual student.

As of April 2023, veterinary students in their final year of school can request a four-week elective rotation at Liberty Wildlife, learning about and practicing wildlife medicine under the primary mentorship of their faculty member, Dr. Alexandra Goe. While it is common for students who select the wildlife rotation to have a long-standing interest in the care of exotic species, some students are completely new to the field. At Liberty Wildlife, they learn critical skills like safe handling of wildlife, triage examination, diagnostic testing, treatment administration, anesthesia, and surgery for a variety of species.

Since starting the program in April, Midwestern University faculty and students have provided primary care for over 500 injured and orphaned animals. Students have a unique experience at Liberty Wildlife, as they gain real-world hands-on medical experience with wildlife species.

Many students start their first day of the rotation having never handled a bird or exotic mammal of any species before. By their last week, they are often comfortable performing a complete patient work-up, including anesthesia and surgery if needed. It is incredibly rewarding to see students gain clinical confidence and compassion for wildlife medicine through their time at Liberty Wildlife! The goal of this program is for graduating doctors to feel comfortable providing necessary critical care to injured wild animals, prior to transferring them to a certified wildlife rehabilitation center.

Starting in July, the partnership with Midwestern will expand when the University welcomes their first wildlife intern. Veterinary interns are graduated veterinarians who spend an additional year of training in a specialty area, often as a necessary step before starting a residency program. Residency programs are usually two to three years long, depending on the type, after which veterinarians are eligible for becoming certified specialists in their field of training (typically after taking a comprehensive examination and publishing research) – needless to say, it is a long road from graduation to becoming a wildlife specialist!

Midwestern University and the College of Veterinary Medicine are truly thrilled to join in this new partnership with Liberty Wildlife, and we look forward to the continued growth of the program.



*Student Mia Felix (c/o 2024) examines an orphaned raccoon, held by Dr. Goe*



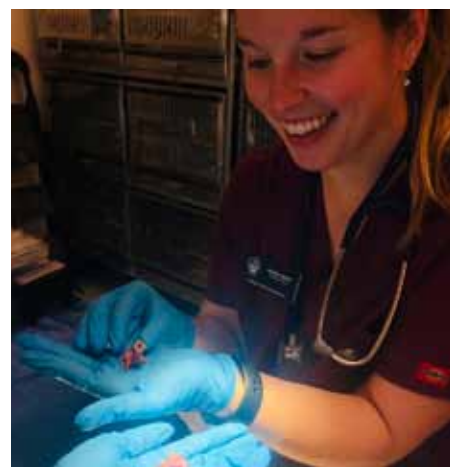
*Student Ashlyn Davis (c/o 2023) holds a long-eared owl as Dr. Goe examines a wing injury.*



*Students Mia Felix and Morgan Hirsh (c/o 2024) tend to a leg wound in a songbird.*



*Student Morgan Hirsh (c/o 2024) provides medication to an injured juvenile cottontail rabbit.*



*Student Ashlyn Davis (c/o 2023) performs intake examinations on nestling house sparrows.*

Photos courtesy of Dr. Alexandra Goe

# When is a Rescue Really a Kidnapping?

by Megan Mosby

*“Making a difference to the welfare of animals doesn’t require a massive effort; it requires small actions that can make a significant impact.”*

Paul Oxtan

A big part of what we do every day is address issues regarding the rescue of wildlife in trouble. And, that is as it should be.

To be very clear, however, sometimes a rescue is not a rescue at all... it is a kidnapping...and that we do not do if it is at all possible.

Many times during the spring, caring people are enticed into watching the nesting/brooding birds in their yards. One of the most common hotline calls we get is from a homeowner who has had the good fortune of a hummingbird building a nest outside the kitchen window. All of the sudden doing the dishes is fun...checking on what the mom hummingbird is doing has become a habit in much the same way that a video cam in an eagle’s nest is, but these are YOUR hummingbirds, and you are doubly invested in their well-being. Then at some point you don’t see mom snuggled tight on her babes...she is gone...she must have been killed because she has up to this point been the model mom. What do you do? Well, of course, you call Liberty Wildlife. The very wise Hotline volunteer suggests that you keep a close watch to see if the mother stealthily flies in and delivers food to the two babies who now are able to regulate their own temperature. Yes, indeed, there she is, and it becomes clear that there is no longer room in the nest for mom and her two babies. All this time you were fretting about the demise of the mom, she has been sitting on a limb close by monitoring her babes. It would have been so sad for her to watch them being rescued

by a caring person who thought they were doing the right thing. That is when a rescue isn’t a rescue but an unintended kidnapping.

An incident this past weekend resulted in the kidnapping of some barn owl eggs. Tubers on the Salt River have been allowed to place ropes up the side of a cliff so that they can climb up and jump into the river. I guess this is a good idea...until the rope is a highway to a barn owl’s nest. Barn owls are cavity nesters, and this mom found what she assumed was a pretty sweet spot to lay her eggs and raise her young. During breeding season, birds are hard wired to breed, nest, incubate and raise babies. They are hard wired to brood, feed and teach their babies how to survive in the world. They are hard wired to do this.

Sometimes things happen that make this scenario impossible...parents killed, nest torn down, etc. Or, recently, a person threatened to kill a fledgling great horned owl if someone didn’t come move it from her yard...that is, while the parents were watching over it from a palm tree in the next yard. Our skilled rescue volunteer saved the day for the fledgling, the person and for the parents by relocating it next door to a more hospitable spot.

But, in some cases, there must be a rescue if a safe resolution can’t be found. (*See the condor egg story in this magazine.*) Obviously, the best solution is to make the area safe for the mother to do what she must do...complete her annual drive to

procreate and send babies into the wild.

For this particular mother barn owl on the river, that wasn’t going to be the case. Once the owl and her eggs were discovered by the tubers, her fate and that of her offspring was caste. A rescue was orchestrated even though experienced people suggested that the rope be taken down if the area couldn’t be cordoned off...just long enough for the nesting season to complete. Sure, it was possible to climb up the rope, snag the eggs from the mother and take them away to incubate. Sure, it is possible to raise baby owlets without a parent...but is it the best solution? I think not. Just because you can, doesn’t mean you should.

As wildlife rehabilitators, we have all learned how to do the job...some better than others...but what we really need to do is assess what is best for the owl and its parent. Folks out for a good time do not always have to come first.

Cooler minds could have let the mom complete the task nature meant her to do. The rope could have been cut down, the area cordoned off, and actions explained to the inquisitive public. They more than likely would not only understand but also embrace being a part of what was best. Optimism aside, the opportunity to do the right thing was wasted, and sadly, this momma barn owl ended up the victim of a kidnapping.



# Liberty Wildlife

## Non-Eagle Feather Repository – LWNEFR

### Urban Dwellers

by Robert Mesta

Coordinator, Liberty Wildlife's Non-Eagle Feather Repository

The 2020 census count determined that the U.S. Native American population had grown to 9.7 million, just short of the pre-European settlement population estimate of 10 million. Before the pre-European settlement of north America (north of the Rio Grande) Native Americans hunted, fished, farmed, and roamed the diverse and productive ecosystems throughout the north American landscape.

The creation of the reservation system in the mid-1700s found Native Americans being relocated to parcels of land for which they had no historical or cultural connection. Challenged to try to farm lands that often had no agricultural value. Native Americans lost 99% of their ancestral land base as a result of the relocations.

Today there are 326 federally recognized reservations totaling 56,200,000 acres. The largest is the Navajo Nation Reservation at 16 million acres, and the smallest is the Pitt River Tribe at 1.32 acres. There are 574 federally and 63

state recognized Tribes which means not all Tribes have reservations, and some have to share reservations. By the mid-1800s Native Americans began a diaspora from their reservations to the major cities of America as part of assimilation programs to Americanize them or to find employment and improved living conditions.

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*“Native Americans have maintained a very special connection with the animals in their natural world, especially birds.”*

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Today, approximately 75% (7.3 million) of the Native American population lives in urban environments. There are six metro areas in the United States with Native American populations exceeding 100,000. For example, Arizona has a Native American population of 391,620 and 41% (161,178) live in the Phoenix metro area.

Scattered within these urban environments and separated from their ancestral lands and traditional gatherings, these urban dwellers have lost important sources for feathers. Feathers, critical to the creation of their religious, ceremonial and dance regalia, and healing implements.

The Liberty Wildlife Non-Eagle Feather Repository recognizes the challenges these urban dwellers face and outreaches to them by attending native gatherings throughout the valley providing information on applying for feathers.

Native Americans have maintained a very special connection with the animals in their natural world, especially birds. One that shaped and sustained their culture. To honor this relationship the Liberty Wildlife Non-Eagle Feather Repository will be sponsoring its first annual Native American Cultural and Wildlife Celebration Day on November 19, 2023. (See page 22 for more information)

*Save the Date!*

***The earth does  
not belong  
to man,  
man belongs  
to the earth.***

**Chief Seattle**



Harris's hawk  
Photo by Mike Ince



# The Wonder of **WILDLIFE**

natural habitat photography

This page (clockwise from top):  
Bighorn sheep – photo by Mike Ince  
Great egret – photo by Ceci Hampson-Ellis  
Collared lizard – photo by Ceci Hampson-Ellis  
Mandarin duck – photo by Randy Vuletich

Opposite page (clockwise from top left):  
Broad-billed hummingbird – photo by Ken Hauser  
Bald eagles – photo by Ken Hauser  
Green heron – photo by Ken Hauser  
American avocet – photo by Ken Hauser  
Raccoon – photo by Randy Vuletich







# Daily Care

## First stop, the Intake Window!

By Alex Stofko, Daily Care Coordinator

If you have ever had to bring in an injured or orphaned animal you have been greeted at our Intake Window by one of our amazing volunteers. The Intake Window is open rain or shine, almost 365 days a year, from 8am-6pm. These volunteers help receive the thousands of animals that come through our doors each and every year, and also answer our information line to respond to questions about location or hours of operation. Between October and March, these volunteers will help with laundry, cleaning, and any additional needs around the hospital. But between April and September, they are constantly helping a stream of new patients that have been brought in by the caring public. If you arrive before or after work, or on a super hot or windy day to bring in an orphaned or injured animal, you may have to wait in a short line.

The Intake Window volunteers work the “window” just like a human hospital reception desk. They take down information on the new patient’s status and

the location found, along with details about the finder. All this information helps us fully assess an animal to make sure they are getting the right treatment. For example, knowing whether an animal was attacked by a cat or dog lets us know to double check for puncture wounds and treat with antibiotics. Talking with the public about the animal they have brought in gives us valuable information, which helps determine the animal’s treatment plan.

In the beginning of June, we had a once-in-a-lifetime intake. A young couple from a cactus removal company arrived at our window, saying they had a nest in said cactus. But not just any cactus, a saguaro that had been removed because it was starting to fall. They rolled up with their truck and the saguaro cactus tilted at an angle on the trailer. The couple had checked the lower holes of the cactus before removing it, but were unable to reach the hole near the top. They waited, and did not witness any birds coming

or going from the hole. However, when it was removed and placed on its side, they immediately heard the chirping of birds from the top hole. One of our volunteers was able to reach inside the small two-inch diameter hole and remove the baby sparrows inside. All the babies were assessed and moved into our Orphan Care department, where volunteers feed baby birds around the clock during the summer. Although we encourage everyone to trim their landscape during non-breeding season, the sick saguaro had to come down or it would have fallen down.

Those sparrows, like the many other orphaned and injured animals we get in, will be raised until they are ready for release back into the wild. Our Intake Window is the first stop for every patient on their journey through Liberty Wildlife, and our volunteers are ready to greet each and every member of the public as they approach with our next intake.

Photos by Acacia Parker



*Barn owls brought to Liberty Wildlife for care*



*Dr. Reeder and a volunteer assess a great horned owl brought to the Intake Window*



# Medical Services

## Urban Wildlife Diseases

by Jan Miller,  
Animal Care Coordinator

We all enjoy seeing wildlife in and around our yards. They bring us a sense of wonder and excitement. Their beauty is often breathtaking, and the wildness they represent inspires a curiosity about them.

Bird feeders and water features are very popular. They both attract and care for our avian species. Mammals are drawn into our neighborhoods for many of the same reasons.

Our yards are the perfect draw for wildlife. They provide shade, shelter, water, and a food source for many. What's not to love about all these amenities?

One of the issues we often see here at Liberty Wildlife is the onset of various diseases affecting backyard birds and raptors. Many of these diseases are in the environment and

are very contagious among the animals. We tend to see the trends of these common diseases more in the summer, during breeding season, coupled with communal feeding and drinking at the limited number of water sources around town. Disease is spread much easier in urban environments than rural areas for this reason.

Disease like trichomonas is spread mainly by the pigeon and dove species. It is a protozoa that gets in the throat, mouth, or crop of the bird and causes them to be unable to eat. As long as they can eat or drink they can contaminate the water source or food source, which can spread to others in the flock. You will often see a die-off if this happens. Any raptor that grabs the ill bird will eat or feed it to their young, who in turn will end up ill and either pass away or be brought to Liberty Wildlife.

One of the other more common diseases we see with the onset of summer is botulism. Botulism is a bacteria bacterium we see mostly in waterfowl, such as ducks and geese. Botulism can happen when there is a sudden change in water level in man-made lakes or ponds, which causes a die-off of flora or fauna, organic decaying matter, which causes the bacteria to flourish. The ducks eat the decaying matter or the infected fish, and then get sick from it. Unfortunately, a floating fish is often a delicious snack for a bald eagle or osprey.

This year we had an outbreak of the avian flu. It is a highly pathogenic disease, and it took its toll on

waterfowl and even the California condor populations. At this time, we are unsure how or if it affected the smaller passerines. This disease spread more due to communal feeding—birds congregating around a similar food or water source.

This is not to talk you out of inviting wildlife into your yard, because there are many benefits to having them. There are a few things that you can do to help stop the spread of disease. It is okay to let your water feature (if it is not moving water) or bird bath go empty a few days. This can help kill off some of the disease. Also, let your bird feeders be empty a day or two. The birds will not disappear—they will come back. This can help with having the birds that are sick be found and brought to Liberty Wildlife and help the healthy ones have less contact with those that may be sick.

A tidbit all should know is that it is illegal to feed large mammals such as javelina, coyote, raccoons, and bobcats. They can learn bad behaviors that can put them and yourself in a dangerous situation. Please do not put food out for them. They ultimately have to pay the price by being relocated or worse, losing their life due to dependency on being fed by humans. Water sources they go to for much needed refreshment is fine.

Continue to enjoy the amazing desert wildlife. They not only add beauty to our world but they serve a great purpose beyond our enjoyment.



Photo by Acacia Parker

*Harris's hawk with canker  
being treated at Liberty Wildlife*

# Liberty Wildlife Non-Eagle Feather Repository Program

**(LWNEFR)**

In 2010 Liberty Wildlife in collaboration with the U.S. Fish and Wildlife Service, Region 2, established the LWNEFR. The LWNEFR is permitted by the U.S. Fish and Wildlife Service to accept, hold, and distribute non-eagle feathers to Native Americans belonging to a federally recognized tribe for religious and ceremonial purposes.

The LWNEFR's mission is to provide Native Americans belonging to a federally recognized tribe, with a legal source of non-eagle feathers for religious and

ceremonial purposes, with two major goals.

First, support Native American culture by providing the non-eagle feathers needed to construct their religious, ceremonial, and dance regalia and implements used in ceremonies.

Second, every year thousands of birds are taken illegally from the wild and sold on the black market. The LWNEFR is working to discourage the purchase of illegally harvested birds by providing

a legal and no cost source of feathers, thus, helping to conserve our native bird populations.

The LWNEFR is a unique program in that it has both a cultural and conservation focus.

To date, the LWNEFR has shipped approximately 5,750 feather orders (approx. 522/year) to Native Americans representing 248 tribes located in 46 states.



## The Liberty Wildlife Non-Eagle Feather Repository First Annual Native American Culture and Wildlife Celebration

Throughout history Native Americans have maintained a special connection with the animals in their natural world, one that has shaped and sustained their culture. Come honor and celebrate this connection.

### Activities:

Native American Performances; Dancers and Singers  
Native American Artists will be displaying and selling their Art  
Native American Exhibits, Demonstrations, and Storytelling  
Eagles, Hawks, Owls, Falcons, and other birds will be on exhibit  
Raptor flight shows  
Wildlife Education programs  
Native American foods and non-alcoholic beverages

Native American performers that would like to participate or Artists that would like to display and sell their art, email: [robertmesta@cox.net](mailto:robertmesta@cox.net) or call or text 520-240-7406 for information.

For more information on Liberty Wildlife and the Feather Repository go to [www.libertywildlife.org](http://www.libertywildlife.org).

Liberty Wildlife, 2600 E. Elwood St., Phoenix, Arizona 85040

## Save the Date!

**November 19, 2023 - 9am-4pm**

**Sponsored by SRP (Salt River Project)**



# Your Support is Certified!

*Chris Sar, Development Consultant*

Here on our campus, just south of the airport, and just off the busy I-10 freeway, our quiet wildlife oasis continues to evolve and develop. We added many visitor enhancements in 2022 and 2023, including a new California condor enclosure in March 2022, the George Cole memorial serenity garden, new enclosures for training Education Ambassadors, and an enclosure for riparian species next to our wetlands. Several enclosures were spruced up with new paint, and additional shade sails now line all the educational trail pathways.

This is the work that is supported by memberships and sponsors who donate to develop and maintain our campus and the exhibits. Each year many individuals choose to support Liberty Wildlife by becoming members, or by making gifts as animal sponsors.

Both groups' contributions help us to care for animals as they receive emergency care, including surgeries, and make possible intensive long-term rehabilitation when necessary. And when members visit, they may even get to peek through the public visitor windows into both our triage and surgery suites and see the care in action!

Starting at just \$30 per person, membership has its privileges. Depending on your level of membership, some benefits include:

- Admission throughout the year; plus, extra guest passes at higher levels
- Invitations and early admission to special events at Liberty Wildlife
- Discounts on merchandise in our Gift Shop
- Invitations to members-only activities and events (like expert-led birding hikes)
- Discounts on preview events, new exhibits and special event programs; Invitations to our Speaker Series, Nature Hikes, Shadowing Wildlife Trainers and more...

If you can't visit Liberty Wildlife in person, sign up as a Sponsor of a particular type of animal. You can sponsor the Eagles, Owls, Falcons, Hawks, Corvids, Vultures, or our Mammals, or Reptiles. You can even target your support specifically to animals taken into our Orphan Care department.

Sponsorships also make great gifts for special occasions (think Mother's Day, Father's Day or the birthday of that hard-to-buy-for person in your life).

The animal Ambassadors that you can visit at Liberty Wildlife are just a small representation of over 11,000 birds, mammals, reptiles and amphibians that are brought to our doors sick or injured every year. On average, Liberty Wildlife takes in over 35 animals every day of the year.

To become a member or to sponsor wildlife, visit:  
<http://libertywildlife.org/how-to-help/donate/>



Get Involved at Liberty Wildlife



# Urban Wildlife... *continued from page 14*

mourning dove nesting on a metal grate on my side yard, there is no shortage of life in the place that I call home.

And, I imagine you have a safe bubble too, where you live and thrive and love. But it might be bigger—and stronger—if you look a little closer, breathe a little deeper, and listen a little harder, to what's outside your front door.

(1) Library of Congress (2023). "City Life in the Late 19th Century." <https://www.loc.gov/classroom-materials/united-states-history-primary-source-timeline/rise-of-industrial-america-1876-1900/city-life-in-late-19th-century/>

(2) Urban Wildlife Alliance (2018). "What is Urban Wildlife?" <https://urbanwildlifealliance.org/2017/04/26/what-is-urban-wildlife/>

(3) Law Insider (2013-2023). "Urban Wildlife Definition." <https://www.lawinsider.com/dictionary/urban-wildlife>

Photos this article by Acacia Parker — Page 13 left to right:

1. *One of many greater roadrunners in our neighborhood*
2. *A Cooper's hawk chills on our view fence, watching for birds to catch (and he did catch one about five minutes after this photo was taken)*
3. *A gopher snake makes a quick getaway across the road in front of our house*



*Gambels Quail hanging out on back fence*



**Urban wildlife - coyotes**  
*Photo by Ceci Hampson-Ellis*



# Research & Conservation

*"...to nurture the nature of Arizona"*

by Laura Hackett, Biologist,  
Research and Conservation Coordinator

The mission of Liberty Wildlife in its simplest form is "to nurture the nature of Arizona." This goal is getting harder as more and more nature is being displaced by new buildings and outward expansion from the main cities. But this isn't a bleak story. For, nature is resilient. Somehow, despite changes in weather patterns, increases in pollution levels and, of course, human interactions, nature stands strong. Mighty trees bend and sway with the monsoon winds. Blossoming flowers expel their seed to infiltrate near and far. To quote Jeff Goldblum in Jurassic Park, "... if we could only step aside and trust in nature, life will find a way."



team receives calls and reports from crew members who have found native species nesting inside or on top of equipment. Large metal objects which would seem to be menacing to small species, appear to be perfect hiding spots for the tenacious dove. Even the speckled ground of a construction site can be a quiet respite for a nighthawk to drop her eggs inconspicuously. Many of these large sites only have operations going in certain areas at a time, otherwise the area is quiet, and devoid of many predator species. The equipment lies in wait, and may not move for weeks, so it offers shade and protection for a mother who needs that space to sit and raise her chicks.



Photos by Laura Hackett

Arizona can show you proof that life is finding its way in this large, ever-changing world. The most common examples I see during my turn as a wildlife biologist with Liberty Wildlife's Research & Con-

servation team is, in fact, inside these large construction projects where you'd expect a barren expanse. Often, our

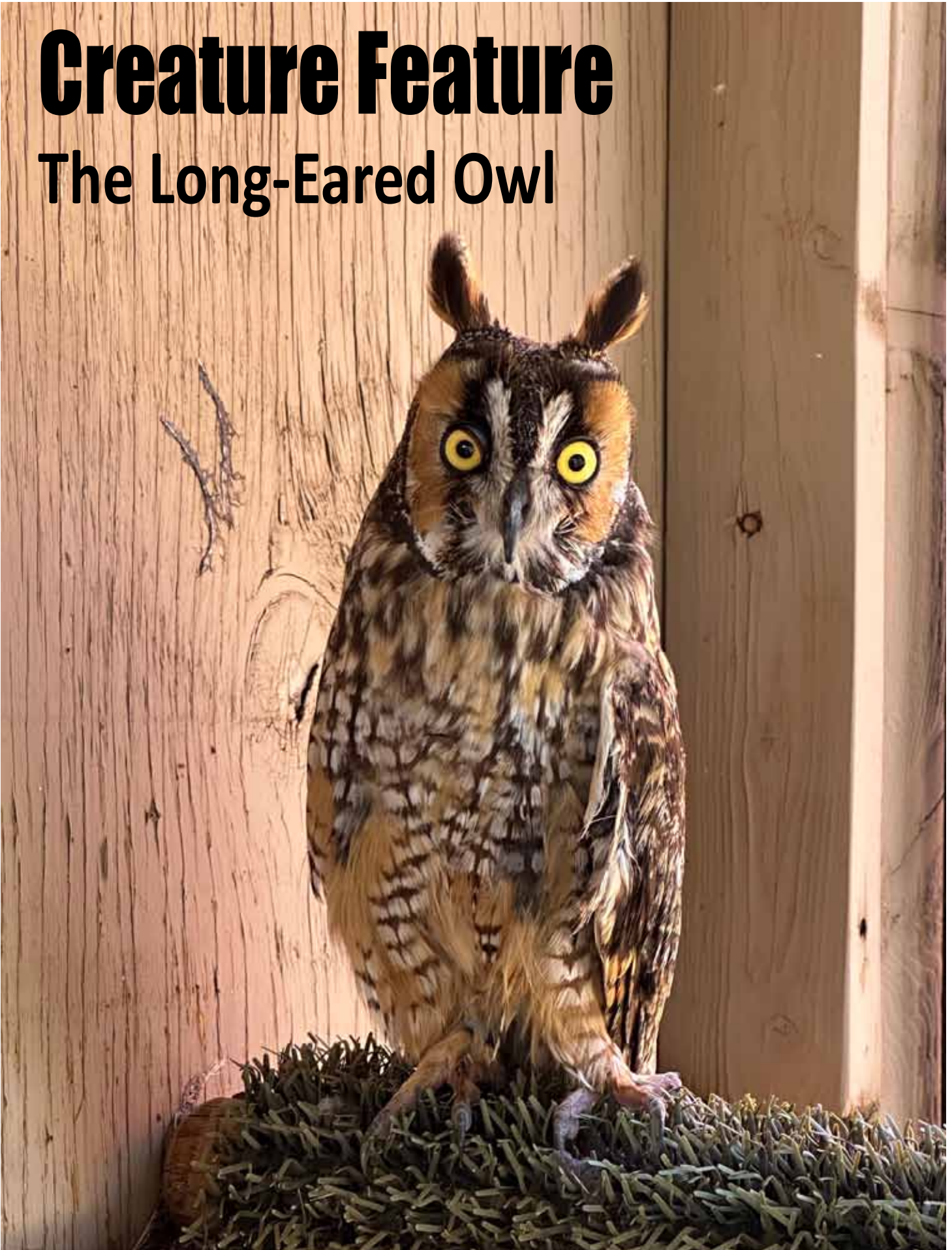
team receives calls and reports from crew members who have found native species nesting inside or on top of equipment. Large metal objects which would seem to be menacing to small species, appear to be perfect hiding spots for the tenacious dove. Even the speckled ground of a construction site can be a quiet respite for a nighthawk to drop her eggs inconspicuously. Many of these large sites only have operations going in certain areas at a time, otherwise the area is quiet, and devoid of many predator species. The equipment lies in wait, and may not move for weeks, so it offers shade and protection for a mother who needs that space to sit and raise her chicks.

The goal of the biologists on our team is to work with the companies within the parameters of the Migratory Bird Treaty Act of 1918. For those who haven't heard of this law, it states that all migratory birds and their active nests are protected from harm. It's easier to count the species NOT on the list since almost all the birds you see in your backyard do fall under this protection. From the fierce hummingbird and docile mourning dove to the loud grackle and the impish mockingbird, the law protects them all.

**R&C**...continued on page 29

# **Creature Feature**

## **The Long-Eared Owl**





# Meet Grayson and Logan

by Acacia Parker, Public Outreach Coordinator

There's an easy list of owls to choose from when someone mentions they've seen one in their neighborhood. Great horned owls, burrowing owls, and western screech owls are the first that come to mind, especially when that neighborhood is in the middle of the city. But the truth is, Arizona has thirteen different species of owls. From the largest—here comes the great horned owl, again—to the very smallest—the infamous elf owl, who is the world's smallest raptor—there are certainly some you'll see far more often than others. This includes one many haven't even heard of and will likely have to go searching to find one: the oh-so secretive long-eared owl.

Found all over the United States, this slender owl is known for its dark orange face, and the intricate black, brown and buff patterns on its feathers. Its ear tufts tend to be on the longer side, and with vertical white lines between its yellow eyes, this medium sized raptor can appear bigger than it is. They are often found in dense vegetation and forage in open grasslands or deciduous woodlands; perfect for hunting their prey.

What's on their menu, you ask? Well, that would be small mammals, including voles, mice, kangaroo rats, shrews, pocket gophers, and even young rats and rabbits. They've also been known to add small birds to that list if the previous are difficult to find. They hunt by flying low, back and forth, over open ground; they've also been observed hovering over their prey, or from high perched positions. Once they catch sight of their meal, they attack with their small, but powerful talons, and with a bite to the back of the skull, they will then swallow their prey whole.

If you're hoping to catch sight of one of these reclusive owls, you're most likely to see them in ponderosa pine elevations, between four thousand and seven thousand feet. They are nocturnal—in fact, their hearing is so acute they can find their prey in complete darkness—and their coloring offers considerable camouflage.

If that test of patience is too much, the other option would be to head down to Liberty Wildlife to meet our permanent long-eared owl residents, Animal Ambassadors Logan and Grayson.



Photos by Acacia Parker

**Grayson** came to us in June 2020 with a fracture to his left wing. After further assessment, our volunteers found a dislocated elbow. Though we can't say for sure exactly what happened, based on the location of where he was found, it is likely he was hit by a vehicle. With this type of fracture, surgery wasn't an option, and once healed, it was found Grayson couldn't extend his left wing fully, making flight—and hunting—impossible.



**Logan's** story is vastly similar. Found in June 2020, he also had a left wing fracture with a location that precluded surgery. Like Grayson, once healed, it was discovered he had limited flight capability, making surviving in the wild a difficult feat.

It is never a light decision for us to choose to keep an animal permanently, but Logan and Grayson are welcome additions. While neither are apt to be out in public on a glove like many of our other animal ambassadors, they are a testament to the resilience, and strength, of their kind.



# Storytelling... for the Big Screen

by Chris Sar  
Development Consultant

Talking about the wildlife in our care is always a pleasure, but sometimes a challenge, too. Not everyone can relate to the struggles of an animal the same as they do for a person. And our animals are not pets; they don't "belong" to anyone in particular.

That's why it was such a treat over the past two years to get to know Bill Davis and Kristin Atwell Ford. Not only do they tell stories for a living, but they also do it in the most powerful way—through images. Kristin was the writer and director behind the recent documentary film, "The Weight of a Feather," about our work. And Bill Davis was the director of photography, cinematographer, director of color and design, and all the other technical aspects that made the film pop!



We were pleased to trust their creative approach and steady, gifted hands with this project, which was funded by the Rob and Melani Walton Foundation, with additional support from Virginia G. Piper Charitable Trust. While we had great support, there were many challenges to filming during a pandemic, and with subject matter and "cast" who are both wild and elusive. One part of the film features the work of our Non-Eagle Feather Repository. But the same tribal members who've utilized this service

were also some of those most impacted by Covid and had many travel restrictions.

Nevertheless, Bill and Kristin persisted and completed the film in the fall of 2022. An incredibly rare opportunity in today's film environment then presented itself, as we were able to have a real theatrical premiere at Harkin's Tempe Marketplace, followed by a two-week run in the same theaters. Then just a few months later, the film was broadcast by Arizona PBS during their spring pledge drive. Broadcasts continue, as do private screenings, with businesses and other local groups.

The film has received tremendous reviews, and we received an Arizona Environmental Excellence Crescordia Award in April 2023 for this work of environmental education. Arizona Forward is the local organization that annually awards organizations and projects throughout the state that enhance the quality of life, economic vitality and long-term sustainability of Arizona. Liberty Wildlife is proud to have been honored four times over the past ten years for different aspects of our work.

If you haven't yet seen the film, DVDs are available in our lobby store. And the film continues to stream on PBS Passport to subscribers. More opportunities will present themselves for us to continue to tell these stories far and wide about the importance of caring for our natural world and all the wild creatures with whom we share it.

As of this printing *The Weight of a Feather* was just nominated for six Rocky Mountain Emmy® Awards.

Congratulations to the production team of  
Quantum Leap Productions!

We can't wait for the award ceremony on November 4, 2023.

What's more, the film has been selected for two film festivals taking place this September.



# Events Throughout the Year

The Education Team arrived twenty minutes early. The patio glowed softly with a string of café lights. A soft murmur bubbled out from the kitchen where guests sipped glasses of wine. The team quietly set up their table and carriers with a hawk and an owl. The host approached with wide eyes and great expectation. “They don’t know anything about this! I’m so excited to surprise everyone!”

After a brief announcement, the Liberty Wildlife educators introduced what was to occur. A private education program for all the cocktail party guests (neighbors, friends and family).

A great horned owl had just completed its rehabilitation and was set for release back into the neighborhood it had come from, which happened to be the location of the

private party. “The surprise release was a magical moment that was life-changing ...,” said one excited party guest.

Events like this occurred throughout the fall and into the spring. They are part of the “new” format for the annual Wishes for Wildlife fundraising event. And since we moved to a virtual auction and event, many guests have chosen to host small parties like this at their homes. An added bonus is that hosts can choose their own date for the party—any time between October and May.

Liberty Wildlife has also returned to some in-person events on our campus—a variety of activities for all ages. Partnering with the Great Arizona Puppet Theater in the spring, we hosted two events for the whole family—complete with perfor-

mances, craft stations, and delicious food truck fare. In November, a special evening called “Condors & Cocktails” will celebrate our work rehabilitating California condors before an adult 21+ crowd.

All these events require care and planning by a special group of volunteers known as the Liberty Wildlife Guardians. They bring a mix of ideas, passion for wildlife, and hard-work to make these events memorable. And the group is always looking for others to join them!

Read more about Liberty Wildlife’s events: [libertywildlife.org/events/upcoming-events/](http://libertywildlife.org/events/upcoming-events/).

Learn how to become a Liberty Wildlife Guardian at: [libertywildlife.org/volunteer/wildlife-guardian/](http://libertywildlife.org/volunteer/wildlife-guardian/)

## Research & Conservation (R&C) *...continued from page 25*



*Native birds find a way to create a nest out of materials available — photos by Laura Hackett*

The optimal choice that we offer the management of these sites is to quarantine the area by placing caution tape or cones and asking the team to leave the area for the time it would take for the species to hatch and move on. One large home building company was more than pleased to assist when I found a nighthawk laying on eggs in one corner of a future lot. The manager told his entire team to start ground work on all the other lots except for this one and its neighbor in order to allow her to suc-

cessfully rear her two chicks. Within a month, he emailed me to let me know that the babies had hatched and mom had moved on. Not only did this team allow the birds to stay, but they became birdwatchers at the same time. Possible future Liberty Wildlife volunteers?

The most impressive thing we’ve seen that demonstrates the resiliency of these birds is the nests that they’ve created out of the material at hand. Picture a nest—just a simple cup or bowl shape made of

intricately placed twigs. Some species, more intricate than others. Doves, for instance, seem to build their nests in a hurry and don’t often have the sturdiest nests. But the doves at one of the local newly built sites have searched their location for material and used whatever resources they’ve come across, including zip ties and ropes. We’ve even found some sitting on nests made entirely of thick metal wire. These industrious birds have indeed, waited for us to step aside and found their way.

# First Line of Defense:

## *The Hotline at Liberty Wildlife*

There are so many moving parts when it comes to helping wildlife...especially wildlife that is ill, injured or orphaned. Of course, it starts with a hero.

Obviously, most of the time the first step in the process is you. You were walking to your car, or you noticed something odd in your yard, or you found a disturbed nest...it could be any number of scenarios that sent you scurrying for help. There is an animal in need of help, and you can't just ignore it. But what can you do?

This is where the first hero meets the second one. You go online and find Liberty Wildlife who can help you with your problem. They seem to do it all of the time. **Here's a number to call...480-998-5550.** Ok, there is a recording, but stick with it. You can leave a message and they will call you back.

"They" refers to a person just like you, a hotline volunteer. A hotline volun-

teer is a dedicated person who with training and a good manual can help walk you through the process. It takes a little faith to go ahead and leave a message...will anyone call me back in time? The answer is a big YES!

It happens hundreds of times a day, every day of the week from 8 A.M to 8:30 P.M. Another hero to the rescue. The hotline volunteer is trained to listen to your problem and to respond in the most expedient way. Every day is different and every call brings a new problem needing a solution, and the Hotline volunteer is trained to listen and solve.

Trained by another experienced Hotliner with a Day Coordinator to assist if needed, each volunteer has a support group to rely on. There are so many possibilities...a baby has fallen from the nest; a cactus wren is caught on a sticky trap; a hawk is at the bottom of a power pole and it smells singed; an owl has been hit by a car;

a Cooper's hawk ran into my window. The list is amazingly long and nuanced but finding the solutions to each possibility is a challenge.

The Hotliner persists; finds a solution; sends a rescue volunteer out when necessary; and the animal finds the help it needs to heal and be released. The circle is completed. You could be a part of this tight team whose job is to help the public find the assistance it needs....the public who cared enough to take the time to call for help; the Hotline volunteer who gave a few hours a week to be there when needed.

The hotline is part of the life blood of Liberty Wildlife and coupled with the Rescue & Transport team, Liberty Wildlife volunteers have made a huge impact on wildlife in need.

We thank them one and all!

## **Injured wildlife brought to Liberty Wildlife for care**



*Left:  
Volunteers working to  
remove this cactus wren  
from a glue trap.*

*Right:  
A nestling red-tailed  
hawk brought in for  
assessment.*

*Photos by Acacia Parker*





# Liberty Wildlife Teens

## Young Minds Capable of Change

**By Emily Cossey and Logan Young,  
Teen Volunteers**

Consisting of teens ages 13 to 18, the Liberty Wildlife Teen Program introduces younger generations to stewardship through educational opportunities that explore wildlife engagement and education. At Liberty Wildlife, staff and volunteers oversee teens as they learn reptile handling, practice public presentation, and teach visitors about Arizona's environment and sustainability efforts.

As biodiversity worldwide declines, it is more important than ever for young people to learn about the environment and acquire the skills to communicate this information with others.

Passionate about climate change, water conservation, and nature preservation, Liberty Wildlife Teens surpass expectations by dedicating their extra weekend hours to teach the public. By educating visitors, Liberty Wildlife Teens spread critical awareness of these topics.

Plant adaptations, waste management, and animal behavior are some topics the Liberty Wildlife Teen Program highlights. One activity involves identifying and explaining the component of animals' skulls. Comparing and contrasting animals guide teens

to make inferences about animal diet and foraging habits. The volunteers practice and discuss newly acquired information as a group before sharing it with visitors. Teens also learn how to properly hold various reptile species and introduce these animals to visitors, making reptile handling a large part of the program. At the end of the year, the Teen Program hosts Liberty Wildlife's annual Wishing Tree event in celebration of Earth Day.

In the future, the Teen Program plans to integrate citizen science. With the assistance of college students, Liberty Wildlife hopes to give these teens access to AI bird feeders, allowing them to contribute to real-world science through conducting their own research by identifying and hypothesizing about local birds. Such engagement is sure to spark further conservation interest. The Liberty Wildlife Teen Program allows younger generations to help their community, build professional skills, and bond with fellow teens. Whether it is learning how to publicly present, communicate information, make friends, or hold snakes, the Liberty Wildlife Teen Program is full of excitement and the possibility of real change within individuals and society.



Photo by Emily Cossey

*During the annual Wishing Tree event, Liberty Wildlife teen volunteer, Emily Weckter, showcases her artwork while holding her muse, Lydia the California kingsnake.*



Photo by Ken Hauser

*Jordyn Quinn worked on her Girl Scout Bronze Award at Liberty Wildlife*



Photo by Ken Hauser

*The Encanto-Palmcroft Neighborhood Kids Club raised \$2,000 from a lemonade stand and donated the proceeds to Liberty Wildlife*



Photo by Emily Cossey

*Teen volunteers, Emerson Moody and Oliver Pheil, present on kingsnakes and Gila monsters during public hours.*

# Kids Stuff

## Critters in the Yard!

by Carol Suits, Volunteer Contributor

### Who lives with you?

Is there a wild animal in your yard?

**Wow, I don't know. Maybe!**  
**What kind of wild animal?**

- Have you seen an owl in your tree?
- Do hummingbirds and butterflies go to the flowers in your garden?
- Are there salamanders climbing your wall? Or ants scurrying around on the ground?
- Have you seen a bobcat in your yard?

**I'd better go look!!**

Good Idea! Wildlife is everywhere, even in your yard. They are our neighbors, and you can find them just by looking, listening, and providing wildlife-friendly food, water, shelter, and space to welcome them.



Wildlife comes in all sizes and species. What plants can you grow in your yard to help wildlife?

### Got water?

You may have to look down instead of up in a tree to find wildlife. Water is needed by all living things. This yard is helping an owl by having a water source.



### Got space?

Harris's hawks like high places to look for food and to raise young. Look up to find them on tall building ledges, or like these raptors, high on a light post.



### Got food?

Some wildlife will look for a snack at a bird feeder! While we're not allowed to feed most wild mammals, we can provide water and shelter for them. Sorry, Mr. Raccoon!



### Got Shelter?

Wildlife needs shelter from bad weather and a place to raise their young. This squirrel has found some natural shelter. We can help by building a bird, bat, bee, or butterfly house!



### Wildlife can be curious!

He looks like he's spotted something interesting. Maybe a human!



## Who Lives with You?

To find out who lives with you, provide the things wildlife needs then set up a "critter cam!"



## Who Lives with You? *continued*



A raccoon getting a drink, a bath, maybe washing food?



111 degrees and the backyard birds need water!



A Cooper's hawk stops by

*photos courtesy of Carol Suits*

## Join a Liberty Wildlife Kids' Program

Explore nature's wonders through meaningful and fun activities!



### Be a Superhero!

Grades 1 – 3      8:30am – 9:30am  
Visit with our animal Ambassadors!  
Listen, explore, and learn about nature!



### Be a Nature Explorer!

Grades 4 – 6      10:00am – 12:00am  
Explore ways to help wildlife!  
Participate in hands-on activities to make a difference!

**Meetings are the third Saturday each month starting in September.**

• **Classes are limited to 10 participants**

• **Sign up now for fall sessions**

For more information and to apply please contact Carol Suits at [carols@libertywildlife.org](mailto:carols@libertywildlife.org)

“Let Nature be your teacher”

—William Wordsworth



Great blue heron  
Photo by Ceci Hampson-Ellis

# Liberty Wildlife Facilities Support

by Brooke Pybus  
Facilities Coordinator

“For the Birds” some people would say. But, Liberty Wildlife is also for the people. The staff and volunteers keep our care facility running. Proper facilities support also allows Liberty Wildlife to remain successful in our effort to save and recover injured wildlife. As Facilities Coordinator, many issues of facility woes fall into my lap. My role is to ensure all critical things are in good working order. These include things like air conditioning, freezers, refrigerators, lights, plumbing, bathrooms, and more. Did I mention the wetlands, landscaping, animal enclosures, doors and windows? The list goes on and on. All of it requires care and feeding. Fortunately, Liberty Wildlife is full of dedicated folks who know a thing or two about facility care and feeding.

How do we accomplish this care and feeding month after month? We do it together with staff, volunteers and some “special tools” called volunteer work crews. One of our staff strengths is networking with communities and organizations. Many organizations take pride in donating their time and effort to assist Liberty Wildlife to get needed work done. Service organizations, financial organizations, utility companies, and a multitude of

others, all bring their energy, time and resources to the cause. As facilities coordinator, one of my duties is to oversee the projects worked by these crews. We want to make the most of their time and skill sets while they are onsite. Organizations include: Chase Bank, Avangrid, Streamline, Rhino Solutions, Scout troops, Rotary Clubs, and many others. These work crews vary from just a few folks for a couple of hours of work, to over 30 folks for most of the day.

Sometimes we have to outsource work. Electrical power issues, AC trouble shooting, and other highly specialized equipment, must be coordinated with outside contractors. I coordinate with staff to bring these contractors in and make these repairs in a timely fashion. As a team, we also work together to plan and detail strategic level changes. We discuss modifications, impacts and issues to be encountered as we continue to grow our capabilities and accommodate the wildlife we support now and in the future. A well-supported facility contributes to Liberty Wildlife’s successful deliver of its primary mission to save and recover Arizona wildlife.

Photos by Brooke Pybus



## Donation Statistics:

Organization	# of People	Onsite hrs	Total
Chase Bank	135	4	540
Boy Scouts – Mouse Houses	15	8	120
Boy Scouts – goat barn	16	7	112
Boy Scouts Sculpture Trail	20	5	108
APS (Tree planting)	9	8	72
Rotary Club	20	3	60
Boy Scouts – pond cleaning	10	4	40
Avangrid	10	2	20
Streamline	10	2	20
Rhino Solutions	8	2	16
AZSC	6	2	12





# Liberty Wildlife Wish List

- Shade and sails for Intake Window entrance
- New laptop computers
- Microscopes for Children's Interactive Room
- Telemetry system for flighted birds
- Hardware cloth
- Lumber/enclosure building materials
- Indoor/outdoor swamp coolers
- Cushions for Amphitheater
- Forklift
- Bobcat tractor

## General Office Supplies:

- Paper towels (Kirkland) or any other brand
- Hand soap
- Kid's scissors
- Postage stamps
- Staples, Fry's, PetSmart gift cards
- Manila folders (letter size)
- Heating pads
- Surgical gloves
- Planter saucers (all sizes)
- New AAA, D, and 9-volt batteries
- Printer paper

- Pea gravel
- Decomposed granite
- Surgery lights
- Stainless steel mammal cages
- Fencing for outdoor mammal runs
- Barn fans
- Digital camera
- Brooders
- Stools without wheels
- Mammal control pole

## Medical Equipment:

- 60 & 30 cc syringes
- 18, 21, 22, 23, 25 gauge needles ( $\frac{3}{4}$ " – 1" in length)
- 2" x 2" non-sterile gauze pads
- Chlorhexedine solution
- Tongue depressors
- Cover slips and slides
- Fecalyzers
- Biopsy jars
- 3" x 5" fluorescent green note cards
- Portable anesthesia machine
- Blood machine for in-house blood work

In every walk with nature one  
receives more than he seeks.

—John Muir



A bighorn ram jumping across a canyon — Photo by Randy Vuletich



Liberty Wildlife, Inc.  
2600 E. Elwood Street  
Phoenix, AZ 85040  
Wildlife Hotline (480) 998-5550  
Visit us online at [www.libertywildlife.org](http://www.libertywildlife.org)



Printed on recycled paper



As part of our ongoing commitment to the community, SRP is proud to provide the printing for Liberty Wildlife's WingBeats magazine.



## Become a Member!

Membership at Liberty Wildlife gains you admission for a year and other exclusive benefits depending on your membership level. It also sustains the vital education, rehabilitation, and conservation work that Liberty Wildlife does every day.

Choose the membership level that is right for you and join today!

Mail the completed form and your donation to:  
Liberty Wildlife, Inc.  
2600 E. Elwood Street  
Phoenix, AZ 85040

You can also join or renew online at [www.libertywildlife.org](http://www.libertywildlife.org)

## Annual Support Levels

### ☐ Songbird (\$30)

Free admission for one, stickers, store discounts

### ☐ Flock (\$95)

Free admission for two adults and two kids, stickers, one guest pass, member-only nature hikes

### ☐ Kestrel (\$50)

Free admission for one, stickers, store discounts, one guest pass, member-only nature hikes

### ☐ Hawk (\$100)

Free admission for one, stickers, store discounts, two guest passes, member-only nature hikes, spend an hour with a trainer

### ☐ Owl (\$250)

Free admission for two, stickers, store discounts, five guest passes, member-only nature hikes, spend an hour with a trainer, early entrance to events

### ☐ Eagle (\$500)

Free admission for two, stickers, store discounts, 10 guest passes, member-only nature hikes, spend an hour with a trainer, early entrance to events, behind the scenes hospital tour

## My Membership

Name \_\_\_\_\_

Company \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ ZIP \_\_\_\_\_

Phone \_\_\_\_\_

Email \_\_\_\_\_

☐ Contact me about volunteering

## Gift Membership

Name \_\_\_\_\_

Company \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ ZIP \_\_\_\_\_

Phone \_\_\_\_\_

Email \_\_\_\_\_